Environmental Assessment

for

The West Side Irrigation District/City of Tracy Water Assignment Project

Prepared by

The West Side Irrigation District,
City of Tracy, and
U.S. Bureau of Reclamation

July 2003

Initial Study/Environmental Assessment

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Acronyms and Abbreviations

af	Acre-feet
af/yr	Acre-feet per year
APE	Area of Potential Effect
BCID	Banta-Carbona Irrigation District
$CaCO_3$	Calcite
Caltrans	California Department of Transportation
CE	California Endangered
CEQA	California Environmental Quality Act
cfs	Cubic feet per second
City	City of Tracy
CFR	Code of Federal Regulations
CSC	California Species of Special Concern
CT	California Threatened
CVP	Central Valley Project
DMC	Delta Mendota Canal
DOC	Dissolved organic carbon
DWR	California Department of Water Resources
E.O.	Executive Order
FC	Federal Candidate
FE	Federally Endangered
FONSI	Finding of No Significant Impact
FT	Federally Threatened
gpm	Gallons per minute
IS/EA	Initial Study/Environmental Assessment
ITAs	Indian Trust Assets
MCLs	Maximum Concentration Levels

mg/l	Milligrams per liter
M&I	Municipal and industrial
ND	Negative Declaration
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NRHP	National Register of Historic Places
Reclamation	U.S. Bureau of Reclamation
SC	Federal Species of Concern
SHPO	State Historic Preservation Office
SJCOG	San Joaquin Council of Governments
SJMSCP	San Joaquin County Multi-Species Habitat Conservation and Open Space Plan
TDS	Total dissolved solids
µmhos/cm	Micro mhos per centimeter
WSID	West Side Irrigation District
yr	Year

Executive Summary

Introduction

This Environmental Assessment ("EA") addresses potential environmental impacts associated with the proposed assignment of up to 5,000 acre-feet (af) of water pursuant to an existing Central Valley Project (CVP) water service contract from The West Side Irrigation District (WSID or District) to the City of Tracy (City). WSID and the City have agreed to implement the assignment in two phases (2,500 af each). The assignment to the City would be permanent through the duration of the CVP contract period and any renewal of the contract.

The Proposed Action is needed to provide additional water supply for the City and for the following three reasons:

- Shortages of CVP water supply deliveries south of the Sacramento-San Joaquin Delta, resulting from regulatory constraints in the operation of CVP facilities, have reduced the volume of water available to the City pursuant to its own CVP contract for municipal and industrial (M&I) purposes.
- Planned urban growth within the City will increase water demand beyond the volume of water currently available. Because the assignment water will be subject to dry-year agricultural shortage provisions, the City would not use the assignment water alone to support future urban development.
- Historically, when development occurred within the City in accordance with its General Plan, agricultural lands served by WSID have been taken out of production and detached from the district. This has, and continues to, result in a reduction in the need for CVP supplies for agricultural purposes within the WSID service area. Any future detachments of land from the District are not part of the Proposed Action, and will be subject to separate environmental review in the future as appropriate.

Pursuant to existing policy of the U.S. Bureau of Reclamation (Reclamation), the assignment water will retain its existing agricultural shortage provisions, resulting in 100 percent reductions in delivery in some years. In order to make the assignment water more reliable, the City would need to supplement it with another source or develop storage. As a result, the assignment water alone is not sufficiently reliable to serve urban development, and cannot be used alone to support new urban development. The City would use the Assignment water for one or more of the following purposes:

- Reduced reliance on other existing sources
- Assist meeting existing demands
- Assist meeting future demands

Reclamation is the federal agency responsible for approving the assignment of the water service contract to the City and is, therefore, the lead agency responsible for complying with the provisions of the National Environmental Policy Act (NEPA). WSID is the lead agency responsible for complying with the provisions of the California Environmental Quality Act (CEQA).

Description of Proposed Action and Alternatives

Proposed Action

The Proposed Action is the permanent assignment of a portion of WSID's existing CVP water service contract to the City. Under the assignment agreement, water will be delivered to the City for M&I uses to the City's current service area (the City limits) and the Sphere of Influence (the City's potential future service area) if the areas are covered by the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP) or other consultation with agencies responsible for implementation of the federal Endangered Species Act has occurred, and are within Reclamation's permitted place of use for delivery of CVP water supplies, as determined by the State Water Resources Control Board. The volume of water proposed to be assigned to the City could be up to 5,000 af annually, or about 66 percent of the WSID's existing contracted CVP supply. The actual volume to be delivered to the City would vary from year to year, depending on hydrologic conditions and the operations of the CVP, which affect annual allocations to CVP contractors made by Reclamation; the average annual allocation is projected to be closer to 3,000 af because the water supply from the assignment would be subject to agricultural shortages.

Assigning a portion of the water service contract from WSID to the City would make the City responsible for complying with all applicable water service contract provisions for that portion of the water to be assigned. The water contract assignment from WSID to the City is considered a permanent assignment. It will remain in effect through the duration of the existing water service contract with Reclamation, and would be subject to renewal according to the contract and existing Federal Reclamation law.

Because the City currently receives CVP water supplies through the Delta Mendota Canal (DMC), the assigned water would be delivered to the City's service area through the same facility. No new conveyance or other facilities would be expanded or constructed to deliver the assigned water.

Future detachments of land from the District are not part of the Proposed Action, and will be subject to separate environmental review in the future as appropriate. Detachments from WSID have occurred historically, and will continue as lands within WSID are developed consistent with the City's general plan. WSID notifies Reclamation of such changes through the contractual requirement that no change may be made in the District boundaries by inclusion or exclusion of lands, dissolution, consolidation, merger, or otherwise, except upon the Contracting Officer's written consent. However, the legal procedures for inclusions and exclusions do not always allow the District to notify Reclamation before these actions occur, as the District is often notified shortly before or sometime after approval of an exclusion or inclusion. The inclusion and exclusion of lands from districts is governed by the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 (California

Government Code Section 56000 et seq.), and provides for two methods of initiating such actions. The first is a request by the district. If a district requests such an action, it follows its contractual commitment to obtain Reclamation approval, along with NEPA compliance and determination regarding potential effects on threatened and endangered species and critical habitat pursuant to section 7 and/or section 10 of ESA. The other method, however, is a landowner-initiated action. Under this process, the district may not be involved in the action, and may receive notification only after the Local Agency Formation Commission has acted upon the action. Under these circumstances, the district provides Reclamation with notification of the action, and Reclamation in turn complies with NEPA and ESA as required at that time. Under this method, Reclamation and WSID's approval is limited to acknowledging the real estate transaction that has caused a change to the District's boundary.

The assignment agreement includes provisions allowing for termination under certain limited circumstances, including failure to obtain required approvals and unreasonable costs of litigation defense. If either party exercises its right to terminate the assignment, the assignment would be void and the water that would have been assigned would remain with WSID. This situation would mirror the No Action Alternative described below.

No Action Alternative

The No Action Alternative would preclude assigning a portion of WSID's existing water service contract to the City. The No Action Alternative would not prohibit WSID from assigning a portion of its CVP water service contract or transferring water to other parties in the future, as it has done in the past. Such an assignment or transfer would be a separate action undertaken by WSID and would be subject to separate environmental review in accordance with NEPA and CEQA.

The No Action Alternative would also not prohibit the City from acquiring or developing additional water supplies to meet its existing and future demands from other sources. Such action would be a separate action taken by the City and would be subject to separate environmental review in accordance with NEPA and CEQA, depending on the particular water source.

Reclamation would continue to operate and deliver water as it does currently with implementation of the No Action Alternative.

Alternatives Considered but Eliminated from Detailed Discussion

The Proposed Action and the No Action Alternative have been identified for detailed consideration in the analysis. In addition to the Proposed Action and the No Action Alternative, two other alternatives were identified and considered. They include: (1) WSID serving M&I water supplies to areas outside its service area on a year-to-year basis, and (2) WSID selling water to the City on a year-to-year basis.

These alternatives were eliminated from detailed discussion in the Environmental Assessment because they would not provide a reliable water supply to the City as necessary to support existing demands or future urban needs. Pursuant to California law (Water Code § 22259), WSID can supply water to out-of-district lands only after it determines that the

water is surplus and not then necessary for use within the district. These alternatives were also eliminated from detailed discussion because year-to-year transfers are discretionary and do not provide a reliable long-term supply from an administrative standpoint. Such water supplies would not meet the City's needs.

One other action was considered: reducing the amount of the water assigned from WSID to the City to less than 5,000 af. However, this alternative would not meet the City's purpose and need, and would result in impacts that are similar to that described for the Proposed Action. It was therefore eliminated from detailed discussion.

Summary of Environmental Impacts and Mitigation

Appendix A to the Environmental Assessment summarizes the results of an initial evaluation and documents conclusions regarding potential effects of the Proposed Action. The Proposed Action would have no impact on the following environmental issues: climate and air quality; soils, geology and mineral resources; topography; noise; transportation / traffic; housing; recreation resources; aesthetic resources; hazardous wastes and materials; public services (fire protection, police protection, medical service, schools, parks); and other public utilities (wastewater, storm water, solid waste). Those environmental issues have therefore been eliminated from further evaluation in the Environmental Assessment.

The impacts from implementing the Proposed Action and the No Action Alternative were evaluated for the following environmental resources: water resources (quantity, groundwater, and quality); land use; biological resources; cultural resources; socioeconomic resources; Indian Trust assets; and environmental justice. Since no significant impacts were identified as a result of the impacts analysis conducted in the Environmental Assessment, no mitigation measures are needed or recommended.

The Environmental Assessment concludes that urbanization of lands within WSID has been occurring and will continue to occur, which has reduced the need for water for agricultural uses. This has resulted in agricultural water becoming available for other uses in the area. In addition, the City's water demand for reliable water will continue to increase as growth in its service area, in accordance with its adopted General Plan, occurs. The assignment water will not provide a consistently reliable supply of water because it remains subject to agricultural shortages; therefore, it cannot solely be used to support future planned urban development. In order for the assignment water to be made sufficiently reliable to support future planned urban development, the City would need to either supplement it with another source or develop storage. The water supply will allow the City to firm up existing water supplies, and assist in meeting existing and future demands.

As a result, of the foregoing factors, the Environmental Assessments concludes that the CVP water assignment would not cause future urban growth.

Consultation with U.S. Fish and Wildlife Service

The EA concludes that the proposed contract assignment will not result in adverse effects to threatened or endangered species or their designated habitat. Reclamation considered the San Joaquin Multi Species Conservation Plan (SJMSCP), in which the City is a participant. The

SJMSCP provides a program for mitigation of impacts to habitat associated with implementation of the General Plan. Mitigation measures are required pursuant to the SJMSCP, to be implemented upon initiation of impacts such as grading permits and ground disturbance. Reclamation initiated Section 7 consultation with the U.S. Fish and Wildlife Service (USFWS) on November 21, 2002 regarding WSID's proposed contract assignment to the City. In undertaking its initial analysis under the ESA, USFWS does not consider the existence of the SJMSCP. However, the BO concludes that given the conservation measures proposed in the SJMSCP to minimize adverse effects, it is the USFWS's biological opinion that the project, as proposed, is not likely to jeopardize listed species.

Cumulative Impacts

Introduction

A significantly cumulative impact on the environment would result from the incremental impact of the proposed Action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertake such other actions. Cumulatively significant impacts can result from individually insignificant, but collectively significant, actions taking place over a period of time.

For this analysis, the Proposed Action would cause a significant cumulative affect if its incremental effect would contribute to a significant affect on the quality of the human environment when considered in combination with: (1) other projects located within the City's Sphere of Influence that had been planned according to the City's General Plan and the San Joaquin County General Plan; (2) the assignment of water from BCID to the City; and (3) other water supply transfers, contract assignments or CVP related actions in the San Joaquin Valley.

Implementation of the Proposed Action would not result in significant environmental effects. No changes to the physical, biological, or cultural character of the environment would occur other than the conveyance of water from the WSID service area to the City service area. Land conversion making this water supply available for other uses has and is already occurring in the District. Implementation of the Proposed Action would assist in accommodating the planned development of lands identified in the City's General Plan, and development of those lands has already been addressed in the General Plan EIR. However, implementation of the Proposed Action would not provide a consistently reliable supply of water because it remains subject to agricultural shortages; therefore it cannot solely be used to support future planned urban development. In order for the assignment water to be made sufficiently reliable to support future planned urban development the City would need to either supplement it with another source or develop storage. However, the assignment water would allow the City to firm up existing water supplies, and assist in meeting existing and future demands. As a result, the environmental conditions would essentially be the same whether or not the Proposed Action is implemented. The Proposed Action's contribution to cumulative impacts is considered to be minor, and thus is not significant.

Planned Urban Development in Accordance with General Plans

The City recognizes that the potential effects from proposed developments in the County, when considered together with the development proposed in the City's General Plan, may generate impacts that are considered to be cumulatively significant. The City and Reclamation have determined that, with appropriate mitigation, such impacts can be reduced to less-than-significant levels, with two exceptions:

- The loss of wildlife habitat within the Tracy Planning Area was found to be a significant and unavoidable impact. This determination does not reflect subsequent changes to the General Plan that reduce the amount of open space conversion from 21,237 acres to 17,636 acres, nor does it reflect the adoption and implementation of the San Joaquin County Multi-Species Habitat and Open Space Plan (SJMSCP), or habitat preserve requirements in the Tracy Hills specific Plan EIR. The reduction in acreage to be converted from open space and implementation of the SJMSCP would contribute to mitigating impacts to wildlife habitat associated with implementation of the General Plan.

- The increased discharge of treated wastewater effluent from the Tracy Wastewater Treatment Expansion Project may act in a cumulative manner, with other ongoing actions that adversely affect resident and special-status fish species. These other actions include changes in Delta water quality and flow patterns and entrainment of fish as a result of pumping at state and federal facilities. Although the proposed Wastewater Treatment Expansion Project would comply with all waste discharge requirements established by the Regional Water Quality Control Board, other ongoing regional programs and actions, such as the CALFED Program and Total Maximum Daily Load allocation, are intended to alleviate adverse conditions to these species.

Reclamation and the City also acknowledge that the potential effects from proposed developments in the County, when considered together with the development proposed in the City's General Plan, may generate impacts that are considered to be cumulatively significant. Because the City has committed to implement appropriate mitigation measures identified in the City's General Plan EIR, Reclamation and the City have determined that those impacts can be reduced to less-than-significant levels, including the two issues described above.

As noted in the EA, measures beyond those currently being implemented by the City to comply with the California Environmental Quality Act (CEQA) may be needed to comply with Section 106 of the National Historic Preservation Act when future land use decisions result in land disturbances. For lands that may be subject to physical disturbance a Native America Heritage Commission inquiry and consultation with Native Americans would be required. Implementing this consultation process and treatments recommended during the consultation would mitigate impacts from disturbances to eligible or potentially archeological or historic sites.

Other Water Supply Transfers in the San Joaquin Valley

Reclamation acknowledges that other CVP water related actions have occurred or are anticipated to occur, including requests for CVP Contract assignments and retirement of drainage-impaired lands. Requests for CVP contract water reassignments include:

- Banta-Carbona Irrigation District (BCID) is proposing to assign a portion of its water service contract to the City of Tracy (up to 5,000 acre-feet annually)
- Mercy Springs Water District (MSWD) assignment to Westlands Water District (WWD), Santa Clara Valley Water District (SCVWD), and Pajaro Valley Water Management Agency (PVWMA) (6,260 af); and, to WWD (4,197 af)
- Broadview Water District (BVWD) proposed CVP water service contract reassignment to PVWMA
- WWD has prepared an economic study for the retirement of 200,000 acres of drainage-impaired lands.

These trends, resulting in potential reduction in agricultural lands under production are generally caused by undesirable economic or environmental conditions and will likely continue. However, it is important to note that the EA concludes that the proposed project does not contribute to any impact on agricultural lands under production. The EA concluded that urbanization of lands within WSID has been and will continue to occur, which reduces the need for water for agricultural uses. This results in agricultural water becoming available for other uses in the area. Lands within WSID have converted from agricultural to municipal and industrial uses for the past decade as a result of economic forces and demands for housing independent of district or reclamation actions. Reclamation's approval of the contract assignment that is the basis of the proposed project allows the water to be used in a more flexible manner after the fact that the water has become available as a result of agricultural land conversion.

As indicated previously, implementation of the Proposed Action would not result in significant environmental effects, and has no contribution to cumulative impacts. Implementation of the Proposed Action would assist in accommodating the planned development of lands identified in the City's General Plan, and development of those lands has already been addressed in the General Plan EIR. The proposed assignment water would allow the City to firm up existing water supplies, and assist in meeting existing and future demands. As a result, the environmental conditions would essentially be the same whether or not the Proposed Action is implemented.

Growth Inducing Impacts

The City of Tracy General Plan, which guides future development and land uses within the City's Sphere of Influence, has previously identified the growth planned for the area. The City prepared and adopted an EIR addressing the consequences of implementing the General Plan. Removing obstacles to growth would allow the continued development of the City in accordance with its General Plan. This planned growth would result in significant unavoidable impacts that were identified in the City General Plan EIR. The City subsequently prepared and adopted a series of Specific Plans addressing developments within various areas of the City. The City also prepared and adopted EIRs for each of those plans.

It is envisioned that a majority of lands within the City's Sphere of Influence will be developed into urban land uses, including parks and open space reserves. Land conversion

making this water supply available for other uses has and is already occurring in the District.

The additional water supplies that would be available and assigned to the City would assist in accommodating the planned urban growth within the City's Sphere of Influence. However, implementation of the Proposed Action will not provide a consistently reliable supply of water because it remains subject to agricultural shortages; therefore it cannot solely be used to support future planned urban development. In order for the assignment water to be made sufficiently reliable to support future planned urban development the City would need to either supplement it with another source or develop storage. Implementation of the Proposed Action would allow the City to firm up existing water supplies, and assist in meeting existing and future demands. As a result, implementation of the Proposed Action would not introduce unplanned growth within the City, nor would the Proposed Action contribute to previously identified impacts associated with planned urban growth.

The City will have to meet the requirements of SB 610 when approving growth (of the types specified in SB 610) that is planned to occur in the City. In addition, the City will have to meet the requirements of SB 221 when approving planned growth (of the types specified in SB 221) in the City.

SECTION 1

Introduction

Background

This Initial Study/Environmental Assessment (IS/EA) addresses potential environmental impacts associated with the proposed assignment of a portion of an existing Central Valley Project (CVP) water service contract from The West Side Irrigation District (WSID) to the City of Tracy (City). The proposed assignment is known as the Proposed Project or Proposed Action.

With the assignment of a portion of the water service contract, up to 5,000 acre-feet (af) of water would be delivered to the City annually. WSID and the City have agreed to implement the assignment in two phases, corresponding to future urbanization of lands within the WSID boundaries. The City would initially receive up to 2,500 af annually with assignment of the contract. This volume of water would increase by an additional 2,500 af annually if the second phase of the agreement is implemented.

The City would only deliver the assigned water to the City's current service area (the city limits) and the Sphere of Influence (the City's potential future service area) if the areas are covered by the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP), other consultation with agencies responsible for implementation of the federal Endangered Species Act has occurred, and are within the U. S. Bureau of Reclamation's (Reclamation's) place of use for delivery of CVP water supplies, as determined by the State Water Resources Control Board.

The assignment to the City would be permanent through the duration of the CVP contract period, and any renewal of the contract. The City would become responsible for complying with all applicable water service contract provisions, including reporting requirements, for that portion of the contract right to be assigned.

Reclamation is the federal agency responsible for approving the assignment of the water service contract to the City and is, therefore, the lead agency responsible for complying with the provisions of the National Environmental Policy Act (NEPA). WSID is the lead agency responsible for complying with provisions of the California Environmental Quality Act (CEQA). Reclamation will consult with appropriate agencies, as needed, during preparation of the IS/EA.

Concurrently with the environmental process for this project, the Banta-Carbona Irrigation District (BCID) is proposing to assign a portion of its existing CVP water contract to the City. Similar to the Proposed Action, that proposed assignment would allow the delivery of up to 5,000 af of water to the City annually, and it would be permanent through the duration of the CVP contract period and any contract renewals. In addition, similar to the Proposed Action, the City would become responsible for complying with all applicable provisions of that contract. Reclamation is the lead federal agency, pursuant to NEPA, and BCID is the lead agency, pursuant to CEQA, for that project.

Project Location

The Proposed Action is located within the existing water service boundaries of WSID and the City, which are both existing CVP water service contractors. Both of these parties are located in San Joaquin County, California, and the boundaries of the City overlap to a significant degree with the historic boundaries of WSID. Figure 1-1 illustrates the regional location of these contractors relative to other major features in California. Figure 1-2 shows their respective boundaries relative to local transportation and surface water features.

Purpose and Need

The purpose of the proposed assignment is to meet Reclamation's obligation to facilitate the efficient delivery and re-allocation of CVP water on a willing seller-willing buyer basis per the Central Valley Project Improvement Act. The Proposed Action would assist Reclamation in meeting this purpose by assigning a portion of WSID's existing CVP water service contract to the City. The assignment would enable the City to receive and put to use up to 5,000 af of CVP water supplies for municipal and industrial (M&I) uses within its service area to areas that are covered by the SJMSCP or are covered by consultation being undertaken with agencies responsible for implementation of the federal Endangered Species Act, and are within Reclamation's place of use.

The conversion of land uses from agriculture to urban is already occurring in the WSID service area. As a result, substantially all or most of the water proposed to be assigned is no longer needed for agricultural purposes by WSID, and is needed for M&I purposes in the City (in the same general geographic area as the WSID service area). The City needs a reliable / permanent water supply to meet current and future water demands beyond the volume of water reliably available over the next 25 years. As the City grows, in accordance with its General Plan, agricultural lands served by WSID will be taken out of production and detached from the district, resulting in a reduction in the need for CVP supplies for agricultural purposes within the WSID service area. The Proposed Action is needed to provide a reliable water supply to the City and for the following reasons:

- Shortages of CVP water supply deliveries south of the Sacramento-San Joaquin Delta, resulting from regulatory constraints in the operation of CVP facilities, have reduced the volume of water available to the City for M&I purposes. The water acquired with implementation of the Proposed Action would assist the City in meeting its existing demand.
- Planned urban growth within the City will increase water demand beyond the volume of water reliably available to the City from its various sources. The water acquired with implementation of the Proposed Action would assist the City in meeting future demands.
- Concurrently with the City urbanizing in accordance with its General Plan, agricultural lands served by WSID are being taken out of production and detached from the district. This has, and continues to, result in a reduction in the need for CVP supplies for agricultural purposes within the WSID service area. The Proposed Action would allow the CVP water currently delivered to WSID to continue to be put to beneficial use in the same region, as it becomes surplus to WSID's agricultural demand.

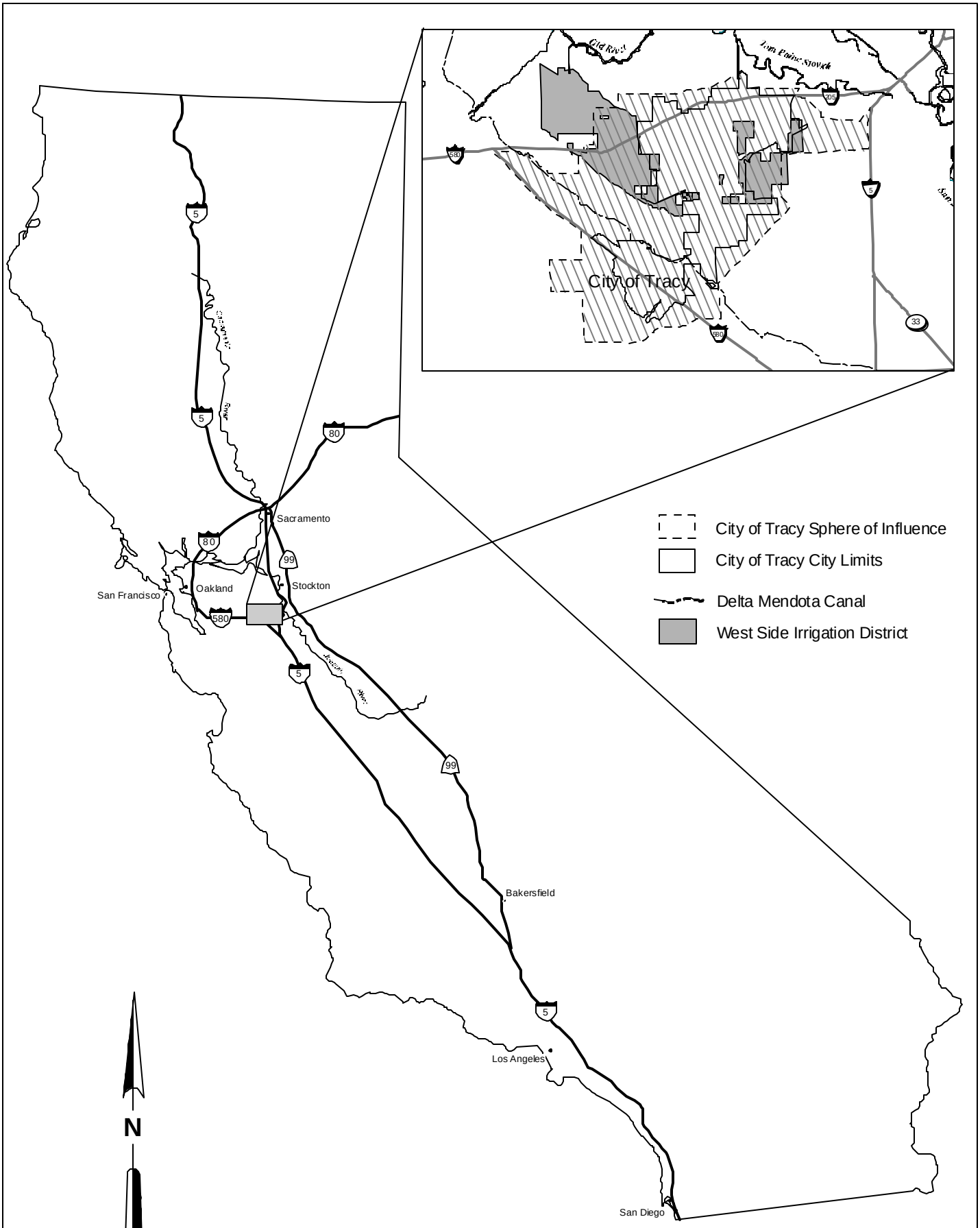

Figure 1-1
Regional Project Location
West Side Irrigation District/
City of Tracy Water Assignment Project

CH2MHILL

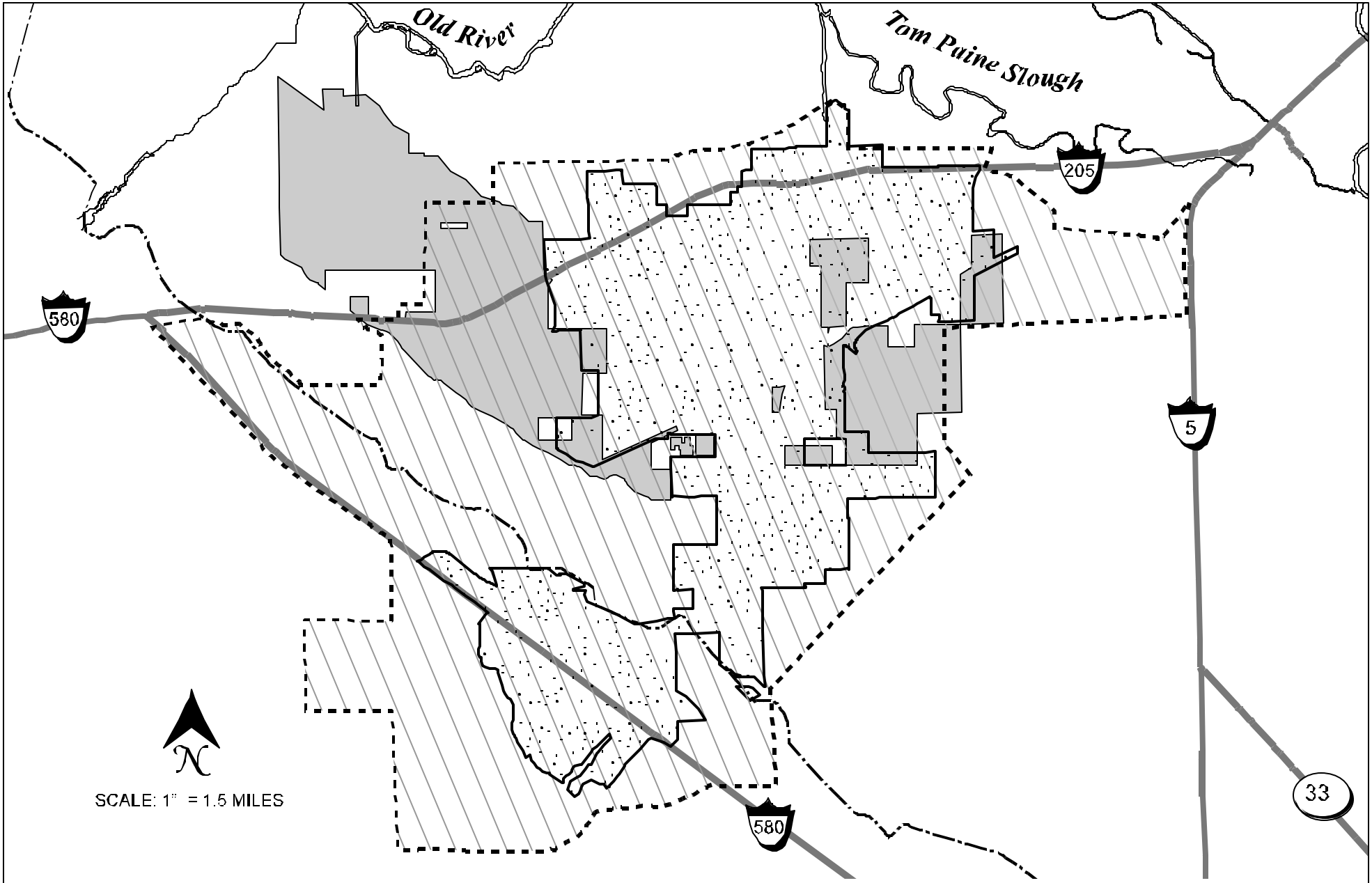

Figure 1-2
District Location Relative to City
West Side Irrigation District/
City of Tracy Water Assignment Project

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Scope of the Initial Study/Environmental Assessment

This IS/EA describes the potential environmental impacts that would result from implementing the Proposed Action. The discussion of potential impacts is commensurate with the expected magnitude and severity of each impact on the environmental resources.

In addition to specific discussion addressing each individual environmental resource, this IS/EA also addresses potential growth-inducing and cumulative impacts that may occur with implementation of the Proposed Action.

Appendix A presents a checklist of environmental issues and summarizes the potential impacts associated with implementing the Proposed Action. This checklist is included to support the discussion presented in this document and comply with requirements of the State CEQA Guidelines (Cal Code Reg. 15000 et seq.).

Appendix B presents a Biological Assessment addressing the consequences of the Proposed Action on species designated in accordance with the federal Endangered Species Act.

Limitations to the Initial Study/Environmental Assessment Scope

As noted previously, BCID is proposing to assign up to 5,000 af of its existing CVP water contract to the City. The BCID water assignment proposal is not evaluated in this IS/EA, but is addressed in a separate IS/EA, for the following reasons:

- The BCID/City water contract assignment and the WSID/City water contract assignment are two separate actions. The two proposals are unrelated to each other, and they are independent of each other, i.e., one water contract assignment could occur regardless of the other proposal.
- BCID and WSID are two separate districts that comprise two separate service areas.

If the two actions were addressed in one environmental document and one of the actions generated controversy or concerns that delayed the schedule for that project, that delay could result in a needless delay for the second project. The BCID water assignment proposal is addressed in the discussion of cumulative effects presented in Section 5 of this document.

SECTION 2

Description of Proposed Action and Alternatives

Proposed Action

Introduction

The West Side Irrigation District (WSID) and the City of Tracy (City) propose to permanently assign a portion of WSID's existing Central Valley Project (CVP) water service contract to the City. With assignment of a portion of WSID's water service contract to the City, the City would then be delivered the water for primarily municipal and industrial (M&I) uses within areas that are covered by the SJMSCP or other consultation with agencies responsible for implementation of the federal Endangered Species Act, and are within the U.S. Bureau of Reclamation's (Reclamation's) permitted place of use for delivery of CVP water supplies, as determined by the State Water Resources Control Board. This specifically excludes the Tracy Hills Project area until it completes consultation with agencies responsible for implementation of the Endangered Species Acts. It is anticipated that the water would continue to be delivered primarily on its existing agricultural delivery schedule. In order to implement the assignment, the City's service area would be included in the place of use for that portion of the contract assigned to the city.

Assigning a portion of the water service contract from WSID to the City would make the City responsible for complying with all applicable water service contract provisions for that portion of water to be assigned. The water assigned to the City will be subject to cost of service M&I rates. If the City elects to transfer any of the assigned water, the cost for that water will be determined by Reclamation's then current water transfer policy.

If, during the first ten years of the assignment, the City elects to transfer all or a portion of the water available through this assignment, it will give WSID the right of first refusal to purchase the water at the rate currently applied by Reclamation plus other administrative costs. The City and WSID would jointly request approval of the purchase by Reclamation.

Finally, during the first ten years of the assignment, the City will provide up to 500 af of water to WSID for up to 30 days if the two WSID pumps concurrently fail. WSID will use its best efforts to replace this water on a 1 to 1 basis during the same water year; however, if such repayment cannot be made, the City shall be repaid in manner agreeable to the City and specified in the water assignment agreement.

Because the City currently receives CVP water supplies through the Delta Mendota Canal (DMC), water through this assignment would be delivered to the City's service area through the same facilities. No water conveyance or other facilities would be expanded or constructed to deliver the assigned water.

Description of the Assignment

Volume of Water to be Assigned

The volume of water proposed to be assigned to the City could be up to 5,000 af annually, or about 66 percent of WSID's existing contracted CVP supply. The actual volume to be delivered to the City would vary from year to year, depending on hydrologic conditions and the operations of the CVP, which affect annual allocations to CVP contractors made by Reclamation.

WSID and the City have agreed to implement the assignment in two phases, corresponding to future urbanization of lands within WSID's boundaries. The City would initially receive up to 2,500 af annually with the implementation of the contract assignment. This volume of water would increase by an additional 2,500 af annually if the second phase of the agreement is implemented.

Duration of the Assignment

The water contract assignment from WSID to the City is considered a permanent assignment. It would remain in effect through the duration of the existing water service contract with Reclamation, and would be subject to renewal according to the contract and existing federal reclamation law.

Proposed Use of Assigned Water

The water to be assigned to the City will be used within the City's service area, which corresponds to the city limits and the Sphere of Influence (the City's potential future service area), areas covered by the SJMSCP, or other consultation with agencies responsible for implementation of the federal Endangered Species Act, and within Reclamation's permitted place of use. Figure 1-2 illustrates the location of the City service area and City limits. The water received would be commingled with other existing and future City water supplies.

The City intends to use the proposed assigned water for M&I uses. Specific land uses that would receive these supplies include residential, commercial, and industrial activities; landscape maintenance; institutional uses; and other uses served by the City water system. The Proposed Action and other new supplies would diversify the City's existing water sources, improve system reliability, and provide additional water for uses that will become established according to the City's General Plan.

No new conveyance or other facilities would be constructed as part of implementing the Proposed Action. The Proposed Action would affect limited portions of the CVP water system, consisting of the DMC.

The proposed assignment of CVP water supplies from WSID, combined with a separate assignment of CVP water supplies from Banta-Carbona Irrigation District (BCID)[1], would contribute to fully meeting future water demand through the year 2023, as shown in Figure 2-1. In 2024, the proposed assignments would assist in meeting future water demand, but water demand is expected to exceed supply.

[1] The Banta-Carbona Irrigation District/City of Tracy Water Assignment Project is a separate action that is being evaluated in a separate Initial Study/Environmental Assessment. The schedule for that project is similar to that for the Proposed Action. The BCID assignment is addressed in Section 5 of this document.

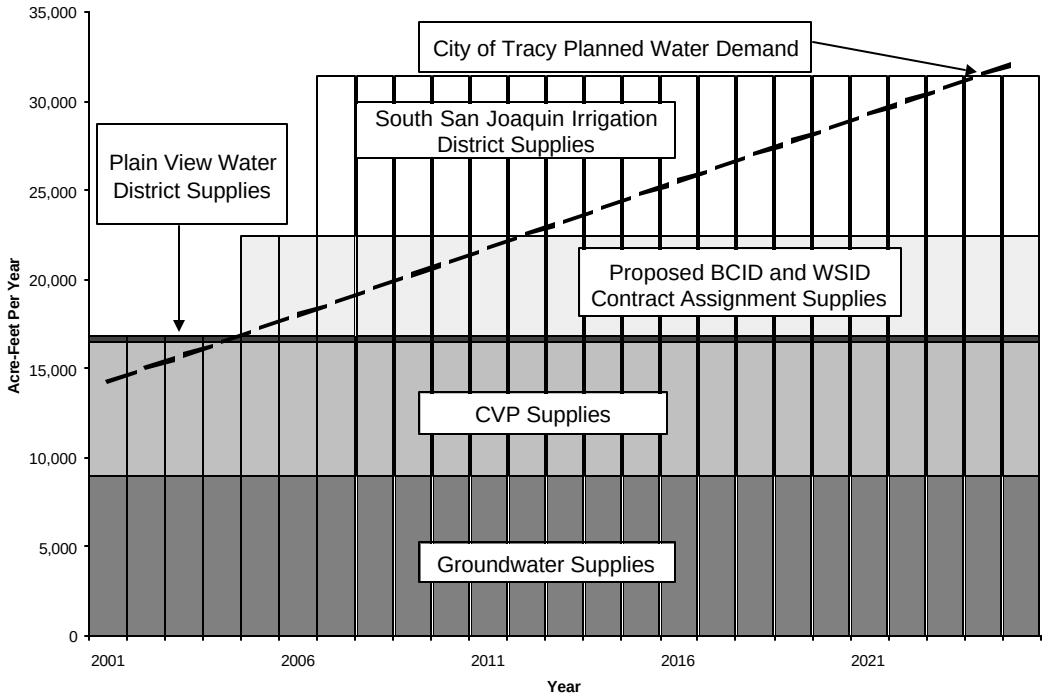

FIGURE 2-1
Relationship of Existing and Planned City of Tracy Long-Term Average Water Supplies to Demand

Facilities Required to Deliver Water

WSID currently receives CVP water directly from the DMC. Water is delivered from the DMC to WSID at DMC mileposts 8.51 Left and 14.79 Left. The City also receives CVP water directly from the DMC. CVP supplies are delivered to the City at DMC milepost 16.80 Right. Therefore, the Proposed Action would divert the water from the DMC to the City about 2 miles downstream of WSID's current turnout location, resulting in water remaining in the DMC for an additional 2 miles of the DMC. Reclamation would continue to have jurisdiction over the DMC and its operation.

No Action Alternative

The No Action Alternative would preclude assigning a portion of WSID's existing water service contract to the City. The existing contract and associated 5,000 af of CVP water supplies would remain with WSID.

The No Action Alternative would not prohibit WSID from assigning a portion of its CVP water service contract or transferring water to other parties in the future, as it has done in the past. Such action would be a separate action undertaken by WSID and would be subject to separate environmental review in accordance with NEPA and CEQA. The No Action Alternative would also not prohibit the City from acquiring or developing additional water supplies to meet its existing and future demand from other sources. Such action would be a separate action taken by the City and would be subject to separate environmental review in accordance with NEPA and CEQA, depending on the particular water source.

Reclamation would continue to operate and convey water with implementation of the No Action Alternative.

Alternatives Considered But Eliminated From Detailed Discussion

The Proposed Action and the No Action Alternative have been identified for detailed consideration in the analysis. In addition to the Proposed Action and the No Action Alternative, two other alternatives were identified and considered. They include:

- WSID serving M&I water supplies to areas outside its service area on a year-to-year basis
- WSID selling water to the City on a year-to-year basis

These alternatives were eliminated from detailed discussion in the IS/EA because they would not provide a reliable water supply to the City, as necessary to support existing demands or future urban needs. Pursuant to California law (Water Code § 22259), WSID can supply water to out-of-district lands only after the district has made a determination that the water is surplus and not then necessary for use within the district. Because such water supplies are not reliable on a long-term basis, they cannot be relied upon by the City to support an urban population or other M&I activities.

One other action, reducing the amount of the water assigned from WSID to the City to less than 5,000 af, was considered. However, this alternative would not meet the City's purpose and need, and would result in impacts that are similar to that described for the Proposed Action, so it was eliminated from detailed discussion.

SECTION 3

Affected Environment

Introduction

An initial evaluation of the potential impacts that could occur as a result of implementing the Proposed Action was conducted. As a result of this evaluation, it was determined that the Proposed Action would not affect several environmental issues.

Appendix A summarizes the results of this initial evaluation and documents the conclusions regarding potential effects of the Proposed Action. Appendix A identifies specific environmental issues, thresholds of significance used to evaluate potential impacts, and conclusions regarding the effects of the Proposed Action. As discussed in Appendix A, the Proposed Action would have no impact on the environmental issues listed in Table 3-1. Therefore, the issues listed in Table 3-1 have been eliminated from further evaluation in this document.

TABLE 3-1
Environmental Issues Eliminated From Detailed Assessment as a Result of Initial Evaluation

Climate and Air Quality	Recreation Resources
Soils, Geology, and Mineral Resources	Aesthetic Resources
Topography	Hazardous Wastes and Materials
Noise	Public Services (fire protection, police protection, medical services, schools, parks)
Transportation/Traffic	Other Public Utilities (wastewater, storm water, solid waste)
Housing	

Description of the Affected Environment

WSID Water Service Area

The WSID was formed in 1915, in accordance with state law, and pursuant to Division 11 of the California Water Code (sections 20500 et seq.). Since its original formation, the District's service area has expanded and contracted in response to requests for service and detachment from service.

Figure 1-2 illustrates the lands within the 6,161-acre WSID service area. Approximately 600 acres, originally in WSID, but currently detached from the district, continue to be served by the district with non-CVP irrigation water. Total acreage within WSID's service area has varied during the past with implementation of various land annexations and detachments. The overwhelming historic trend, however, is that WSID has been detaching lands from service as those lands develop to urban uses. The district was originally about 11,993 acres, and has reduced through detachments by about 50 percent since its creation. Future water

demand in WSID will vary in response to requests for service, hydrologic conditions, cropping patterns, and other factors, but is expected to continue to decline as surrounding lands are urbanized and detached from the district. Table 3-2 shows this historic trend by comparing total district water use and total district acreage for a recent ten-year period from 1990 to 2000.

TABLE 3-2
WSID Historic Water Use and Acreage Irrigated (1990-1999)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Water Use (af/yr)	35,274	31,362	31,813	27,405	29,196	28,159	27,142	27,630	17,205	23,038	22,593
Acres Irrigated	7,874	7,863	7,863	7,832	7,842	7,840	7,177	6,529	6,377	6,318	6,162

Source: WSID, 2001a.

Volume of Water Supply

WSID's primary water supply is from the Old River from a 1916 water right license issued by the predecessor of the State Water Resources Control Board. San Joaquin River water is diverted through a dredged unlined intake canal and flowed by gravity into the District's pumping facilities.

The WSID has a CVP water service contract with the United States[2], as administered by the Bureau of Reclamation (Reclamation) for the annual delivery of up to 7,500 acre-feet (af) of supplemental water for agricultural, and municipal and industrial purposes. It is delivered from the DMC through two turnouts. The water supplied to WSID is currently made available to agricultural land uses within the 6,161-acre service area.

This water is delivered for agricultural purposes and assists WSID in meeting peak demands between the months of May and July. During drier years, the volume of water delivered is subject to reductions according to provisions in the water service contract. Actual delivery of water is also subject to other limitations.

Uses of Water Supply

CVP water delivered to WSID is used for the production of food and fiber within its service area. The CVP supplies have historically been used to supplement other WSID water sources especially during peak irrigation months. Crops in WSID's service area in 1999 consist of those listed in Table 3-3.

TABLE 3-3
Major Crops in The WSID Service Area (1999)

Alfalfa	Corn	Field Crops	Tomatoes/Sugar Beets
Beans	Deciduous Orchards	Pasture	Wheat/Grains

Source: Reclamation, 1999.

[2]WSID entered into water service contract No. 7-07-20-W0045 with the United States in June, 1977. This contract ended on February 28, 1995. WSID and Reclamation are currently negotiating terms and conditions for a long-term renewal contract. It is expected that the ongoing contract renewal process will be completed by February, 2003. The District continues to receive CVP water pursuant to an interim water service contract, Contract No. 7-07-20-W0045-IR6, which was executed on February 28, 2002.

Existing CVP Water Use

The existing CVP water service contract specifies that water delivered to WSID's service area may be used for agricultural and M&I purposes. WSID currently uses water only for irrigation, and therefore, orders water on a seasonal schedule that enables it to be used directly for agricultural purposes.

WSID has a tailwater return flow collection (surface drainage) system. Several drainage laterals serve the western portion of the district—that part of the district lying to the west of Tracy Boulevard—. All drainage facilities on the western side of the district drain into the WSID intake canal. Drainage water generated from irrigation return flow is recycled and repumped into the district's irrigation canals for reuse by district landowners.

Tailwater is also received from Plain View Water District and recirculated into the District's system. During the irrigation season, no irrigation drainage water is disposed of into the San Joaquin River from the western portion of the district. When pumping ceases on October 31 of each year, water may be available for several days in the distribution canals, and runoff may continue for another of couple of days. The return flow from irrigation taking place at that time would be discharged at the district's intake canal at Old River; this amount would be minimal because very few district acres continue to be irrigated at the end of October.

The eastern portion of the district is comprised of approximately 1,552 acres of irrigated lands. Of those lands, 463 acres drain into the district's irrigation laterals (Lateral 9½), and downstream landowners reuse the drainage water. Eventually, that portion of the drainage water that is not recycled for irrigation purposes discharge into Sugar Cut, tributary to Tom Paine Slough, then to Old River.

Location of Use

Figure 1-2 illustrates the boundaries of WSID's service area. Historically, CVP water supplies have been used on lands within this service area. As lands have undergone conversion from agricultural land uses to other urban uses, water deliveries by WSID have historically ceased to those lands.

WSID has undertaken a series of water transfers enabling them to convey these supplies to other parties. Table 3-4 describes these water transfers, including information regarding the year, parties involved, duration, and use of water transferred by WSID.

As shown in Table 3-4, WSID has consistently transferred significant quantities of water to other users on an annual basis. This is due to the decline in demand for water for agricultural uses in the WSID service area. The transfer of this water has not resulted in increased water deficiencies for other users in the WSID service area.

TABLE 3-4
Historic WSID Water Transfers Using Water to be Assigned to the City of Tracy

Transfer Destination	Year	CVP Allocation to WSID (af)	Volume of Transfer (af)	Transfer % of Allocation	Duration	Water Use
South of Delta Various Districts	2001	3,675	2,617	71	1 Year	Agriculture
South of Delta Various Districts	2000	4,875	3,581	73	1 Year	Agriculture
South of Delta Various Districts	1999	5,250	4,245	81	1 Year	Agriculture
South of Delta Various Districts	1998	7,500	0	0	1 Year	Agriculture
South of Delta Various Districts	1997	6,750	4,077	60	1 Year	Agriculture
South of Delta Various Districts	1996	7,125	3,000	42	1 Year	Agriculture
South of Delta Various Districts	1995	7,500	0	0	1 Year	Agriculture
South of Delta Various Districts	1994	2,625	97	4	1 Year	Agriculture
South of Delta Various Districts	1993	3,750	1,341	36	1 Year	Agriculture
South of Delta Various Districts	1992	1,875	300	16	1 Year	Agriculture
South of Delta Various Districts	1991	1,875	18	1	1 Year	Agriculture

Source: WSID, 2001b.

City of Tracy Water Service Area

The City of Tracy water service area is approximately 9,789 acres, excluding the Tracy Hills development. The City Sphere of Influence, located outside of the City of Tracy city limits, is approximately 25,735 acres, and overlaps to a considerable degree with WSID boundaries. As lands are annexed to the City and the city limits are expanded, the City's water service area is similarly expanded.

Volume of Water Supply

The City has several water sources available to meet existing M&I water demand in its service area. The City's existing long-term average supplies equal about 16,888 af per year (Table 3-5). This supply is composed primarily of local groundwater, provided by wells owned and operated by the City, and water delivered by the CVP through a water service contract with the Bureau of Reclamation. A minor amount of water is also supplied through agreement with the Plain View Water District for M&I water service to lands within Plain View Water District's water service area served by the City. The water is delivered to the 293-acre Cheng property, located in the City between Tracy Boulevard and Corral Hollow Road, north of Linne Road.

TABLE 3-5
City of Tracy Existing Water Supplies

Source	Maximum Volume (af/yr)	Long-Term Average Volume (af/yr)	Drier Year Yield Volume (af/yr)
City Wells	9,000	9,000	9,000
CVP Water Service Contract	10,000	7,500	5,000
Plain View Water District	517	388	259
Total	19,517	16,888	14,259

Source: City of Tracy, 2000a.

Planned growth in the City will increase water demand over the next 25 years. As shown in Table 3-6, annual water demand will increase from a current annual demand of 13,500 af to over 32,250 af.

TABLE 3-6
Water Demand Increases Associated With Planned Growth Within the City of Tracy (af/yr)

Year	2000	2005	2010	2015	2020	2025
Water Demand	13,500	17,250	21,000	24,750	28,500	32,250

Source: City of Tracy, 1999.

A water deficiency is expected to occur in the City water service area in about 2005-2006 when demands exceed existing reliable supplies. This is graphically depicted in Figure 3-1. This deficiency would be alleviated when the planned South San Joaquin Irrigation District supplies become available in 2007. A second water deficiency would occur in about year 2017 (Figure 3-1).

As noted in Table 3-7, several of the City's water supplies are subject to shortages. Reductions in available water could occur because of dry-year water allocations, regulatory restrictions, or other factors. The portion of the City's water supplies that is considered reliable is presented as the long-term averages shown in Table 3-7.

The City is taking action to obtain additional water supplies to meet future demands that occur in response to planned urban growth. At present, the City is considering acquiring the potential sources and supplies listed in Table 3-7.

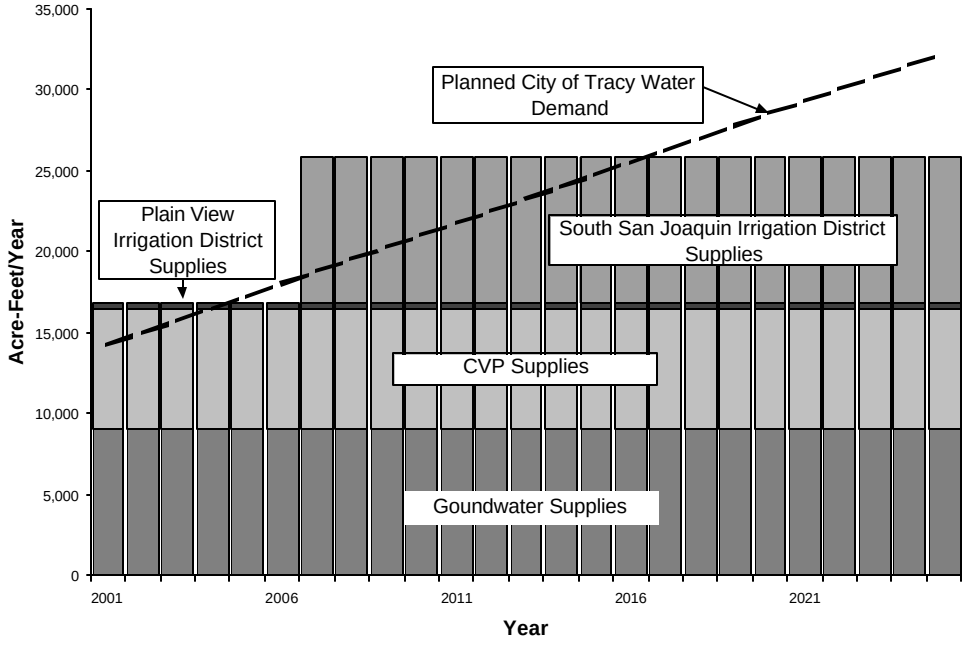

FIGURE 3-1
Relationship of Existing City of Tracy Long-Term Average Water Supplies to Demand

TABLE 3-7
City of Tracy Planned Water Supplies

Source	Additional Maximum Volume (af/yr)[a]	Long-Term Average Volume (af/yr)	Supply Subject to Shortage Provisions
Plain View Water District	3,500[a,b]	2,030[a,b]	Yes
Recycling	Not Quantified	Not Quantified	—
South County Surface Water Supply Project	10,000 (Year 2007)	9,000 (Year 2007)	Yes
Banta Carbona Irrigation District	5,000[a]	2,900[a]	Yes
Byron Bethany Irrigation District	6,000[a,c]	5,400[a,c]	Yes
Total	24,500	19,330	

Source: City of Tracy, 2000a

[a] Potential future water supplies are in different stages of development and acquisition. As such, these sources cannot be considered established.
[b] Development of supplies for M&I use concurrent with annexation of lands to the City.
[c] Water would be made available to Tracy Hills development. Not considered as part of the City's water supplies at this time.

The contract between the South San Joaquin Irrigation District (SSJID) and the City was executed on October 1, 1995. The contract provides for SSJID to sell 10,000 af of Stanislaus River water to the City annually. The contract remains in effect until either December 31, 2029 or the final maturity of SSJID bonds, if later, with provisions regarding an amended contract thereafter.

Uses of Water Supply

Water delivered to the City is primarily for M&I purposes.

Location of Use

Figure 1-2 illustrates the boundaries of the city limits and the City's Sphere of Influence. CVP water supplies have been used on lands within the city limits. As lands are annexed to the City and the city limits are expanded, the City's water service area would be similarly expanded.

Affected Federal Water Conveyance Facilities

The Delta Mendota Canal (DMC) was completed in 1951. It carries water southeasterly from the Tracy Pumping Plant along the west side of the San Joaquin Valley for irrigation, M&I, and wildlife habitat purposes, and to replace San Joaquin River water stored at Friant Dam and used in the Friant-Kern and Madera canals (Reclamation, 2000). The DMC is about 117 miles long and terminates at the Mendota Pool, about 30 miles west of Fresno. The initial diversion capacity is 4,600 cubic feet per second, which gradually decreases to 3,211 cubic feet per second (cfs) at the terminus.

Floodplain Management

Executive Order 11988 (E.O. 11988), signed on May 24, 1977, requires federal agencies to consider floodplain management as part of decisions to implement proposed federal actions. The purpose of this order is to avoid, to the extent possible, long- and short-term adverse impacts associated with floodplain development, and to avoid direct and indirect support of floodplain development wherever there is a practicable alternative within a 100-year floodplain.

Federal agencies are required to reduce the risk of flood loss; minimize the impact of floods on human safety, health, and welfare; and restore and preserve the natural and beneficial values served by floodplains in carrying out agency responsibility.

If development requires siting in a floodplain, action shall be taken to design the project in a way that minimizes potential harm to or within the floodplain.

The Environmental Impact Report for the City of Tracy Urban Management Plan / General Plan indicates that the low-lying areas within the Tracy Planning Area to the north of the City are subject to flooding (City of Tracy, 1993a). The San Joaquin County General Plan 2010 Review indicates that only the northern portion of the city is subject to 100-year flood, and the remainder of the City is not subject to either a 100-year or 500-year flood (San Joaquin County, 2000).

Groundwater

WSID Service Area

There are no district wells or private irrigation wells within the WSID service area. The WSID service area is located within the San Joaquin groundwater basin. This groundwater basin and its characteristics are addressed in the following discussion.

City of Tracy Service Area

The City of Tracy service area is located within the San Joaquin groundwater basin. The San Joaquin groundwater basin is bounded on the north by the Sacramento/San Joaquin Delta and to the south by the Tehachapi Mountains. The San Joaquin groundwater basin is divided into 15 separate sub-basins, primarily based on political boundaries. The County of San Joaquin contains two sub-basins: the Tracy Sub-basin and the Eastern San Joaquin County Sub-basin. The project area is located within the Tracy Sub-basin.

The boundaries of the Tracy Sub-basin are the extent of unconsolidated and semiconsolidated sedimentary deposits that are bounded by the Diablo Range on the west, the Mokelumne and San Joaquin rivers to the north, the San Joaquin River to the east, and the San Joaquin-Stanislaus County line to the south (DWR, 2001).

Water-bearing formations in the Tracy Sub-basin are of various ages and include the Tulare Formation, Older Alluvium, Flood Basin Deposits, and Younger Alluvium.

Groundwater level trends in the Tracy Sub-basin indicate that water levels in wells have remained relatively stable from 1991 to 2001. The three major factors that would likely influence groundwater levels are: (1) short-term seasonal hydrologic change from spring to fall and fall to spring; (2) annual changes in response to wet and dry precipitation cycles; and (3) long-term changes in response to overdraft or induced recharge.

The Tracy Sub-basin has not shown evidence of overdraft (DWR, 1980), although the volume of groundwater storage in this sub-basin has not been established. Well yields typically range from 500 to 3,000 gallons per minute (gpm) at a depth range of 44 to 1,100 feet. Municipal production wells extract groundwater from below the Corcoran clay layer. The City of Tracy Water Inventory Report estimates that up to 9,000 af annually could be extracted from its nine wells (City of Tracy, 2002).

A portion of this sub-basin is designated as the Tracy-Patterson Storage Unit. This storage unit includes the southern portion of the Tracy Sub-basin from approximately one mile north of Tracy to the San Joaquin/Stanislaus County line. The Tracy Sub-basin comprises approximately one-third of the Tracy-Patterson Storage Unit; it is estimated that the Tracy Sub-basin storage capacity is about 1,300,000 af

Water Quality

WSID Service Area

WSID's primary water supply is from the Old River. Water is conveyed to WSID's service area via existing surface conveyance. CVP water was required to blend with Old River water to make it suitable for agricultural purposes because total dissolved solids (TDS) levels were about 800 mg/l. Installation and use of barriers in the southern Delta by state

agencies generally reduced TDS levels of WSID's Old River water supply to less than 500 mg/l, making blending unnecessary, making the water useful for agricultural purposes without blending. This reduces the need to use CVP water for blending; therefore, CVP water is available for other purposes.

Table 3-8 presents the general water quality of WSID's CVP water supply, as measured at the DMC intake at Lindeman Road. This information consists of best available data and generally provides a long-term record of flow and water quality for the lower reaches of the San Joaquin River applicable for the analysis of the proposed water assignment for WSID.

TABLE 3-8
Delta Mendota Canal Water Quality at Lindeman Road (Median Values)

Constituent	Critical Dry Year Quality	Wet/Above Normal Year Quality
Total Dissolved Solids (TDS)	324 mg/l	192 mg/l
Dissolved Organic Carbon (DOC)	3.2 mg/l	3.7 mg/l
Dissolved Oxygen	8.1 mg/l	7.9 mg/l
Specific Conductance	639 µmhos/cm	338 µmhos/cm
PH	7.7	7.5
Hardness (mg/l of $CaCO_3$)	--	110

Source: City of Tracy, 2001.

As shown in Table 3-8, the CVP water supplies are generally suitable for agricultural and M&I purposes, although TDS concentrations become excessive for some purposes during critical dry-year conditions. For example, water quality objectives for the surface waters in the Sacramento and San Joaquin river basins (including the Delta) specify that dissolved oxygen levels shall not be reduced below the range of 5.0 to 9.0 mg/l, depending on location, and pH shall not be below 6.5 nor above 8.5 (CRWQCB, 1995). If the TDS concentrations are too high for specified uses, the City would have to use groundwater.

City of Tracy Service Area

Private domestic wells serving individual homes typically extract groundwater from above the Corcoran clay layer, which contain poorer groundwater quality. Municipal wells for the City extract water from the deeper confined aquifer below the Corcoran clay layer. The quality of the groundwater found within the City service area exceeds Environmental Protection Agency secondary maximum concentration levels (MCLs) because of high concentrations of sulfate and TDS. Secondary drinking water concentrations address those characteristics that affect taste, odor, and color, but pose no health risk. Groundwater quality of the shallower Tulare Formation is poorer than deeper sources because of higher concentrations of sulfate, TDS, nitrate, boron, and other salts. The groundwater from the shallower zone is also affected by saline water infiltrating from the Delta and agricultural recharge (City of Tracy, 2001).

The southern portion of the Tracy Sub-basin, where the project area is located, is characterized by calcium and sodium. Total dissolved solids (TDS) for water found in the sub-basin are estimated to range from 210 to 7,800 milligrams per liter (mg/l). These

concentrations often exceed the recommended secondary Maximum Contaminant Level (MCL) of 500 mg/l (CRWQCB, 2000). The Tracy Sub-basin includes areas of poor water quality. Locations exhibiting elevated chloride concentrations include the vicinity of the City of Tracy. Elevated boron levels exist from south of Tracy and extend to the northwest side of the basin. Municipal drinking water wells are reported not to require treatment, although disinfection does occur.

CVP Supplies

The quality of CVP water supplies delivered to the City are also presented above in Table 3-8.

Land Use

Existing Land Uses

The Environmental Impact Report for the City of Tracy Urban Management Plan/General Plan indicates that, based on soil types identified in the Tracy Planning Area, Prime Farmland exists within the City service area. No lands designated as Unique Farmland or Farmland of Statewide Importance were identified (City of Tracy, 1993a).

Table 3-9 summarizes existing land uses in WSID and City water service areas. As shown, existing agricultural and open space land uses within WSID and City water service areas are mainly comprised of agricultural uses of approximately 5,676 and 10,972 acres, respectively (DWR, 1996).

TABLE 3-9
Existing Land Uses[a] in WSID and City Water Service Areas

Area	Urban[d]	Agriculture[e]	Open Space[f]	Total
City of Tracy				
Tracy Lands Within City Limits[b]	5,648	3,077	1,064	9,789
Tracy Lands Outside City Limits, Within Sphere of Influence[c]	2,863	7,895	5,188	15,946
Subtotal – City of Tracy Sphere of Influence (Ultimate Service Area)[d]	8,511	10,972	6,252	25,735
The West Side Irrigation District				
WSID Lands Within Tracy City Limits	369	559	0	928
WSID Lands Outside City Limits, Within Tracy Sphere of Influence[c]	2	3,188	0	3,190
WSID Lands Outside City Limits and Outside Sphere of Influence	114	1,929	0	2,043
Subtotal – WSID Service Area	485	5,676	0	6,161

TABLE 3-9
Existing Land Uses[a] in WSID and City Water Service Areas

Notes :
All figures are approximate and based on best information available
[a] Source – DWR. 1996; City of Tracy, 1996.
[b] Does not include Tracy Hills area. City of Tracy City Limits including Tracy Hills is estimated at 12,727 acres. Tracy Hills acreage is estimated to be 2,938 acres.
[c] Includes lands within Sphere of Influence, minus City of Tracy City Limits and Tracy Hills area.
[d] Developed lands correspond to all "U" classes per DWR Land Use Survey Maps; Developed lands presented do not include acreage for existing or planned roadways or freeways
[e] Agriculture lands correspond to all agricultural and related agricultural classes per DWR Land Use Survey Maps
[f] Native lands correspond to all "N" classes, related to native vegetation and rangeland per DWR Land Use Survey Maps

Urban land uses include residential, commercial, industrial uses, public facilities, parks and aggregate resource mining primarily within the City limits, but also in areas otherwise within the City's surrounding Sphere of Influence.

Agricultural land uses consist of row and field crops, orchards, pastures, and other associated agricultural uses, such as dairies and feed lots. In addition to agriculture, open space land uses consist of native vegetation or other undeveloped areas.

WSID Service Area

Land use within the 6,161-acre WSID service area consists primarily of agricultural uses. Crops as of 1999 include alfalfa, beans, corn, deciduous orchards, field crops, pasture, tomatoes, sugar beets, wheat, and grain (Reclamation, 1999).

The amount of irrigated agricultural lands within the WSID service area is projected to decline by 2025. WSID boundaries have already been reduced through detachments by approximately 1,700 acres between 1990 and 2000 (WSID, 2001a).

Currently, WSID service area land uses that are also within the city limits and outside the city limits, but within the City Sphere of Influence consist of agricultural land uses (approximately 3,747 acres [Table 3-9]).

City of Tracy Service Area

As shown in Table 3-9, existing land uses within Tracy City limits are comprised of approximately 5,648 acres of urban land uses and 4,141 acres of agricultural and open space land uses. Urban land uses in the City consist of various residential, commercial, and industrial land uses. Areas within the adjacent City Sphere of Influence, located outside of the Tracy City limits, consist of mostly agricultural and open space land uses, comprising approximately 13,083 acres, with 7,895 acres devoted to agricultural land uses.

Planned Land Uses

Planned land uses within the area jointly served by WSID and City water service areas consist mainly of urban uses in accordance with the City of Tracy General Plan.

WSID Service Area

No substantial changes to existing agricultural land uses are planned for the WSID water service area, except for that portion of the service area located within the City of Tracy Sphere of Influence. As the City implements its General Plan, lands within the area jointly served by WSID and the City (approximately 4,332 acres) will be detached from WSID and

annexed into the city, and would eventually be converted to urbanized land uses, as described in Table 3-9.

City of Tracy Service Area

The City of Tracy General Plan (City of Tracy, 1993b) guides future development and land uses within the city limits and provides direction for future decisions affecting the City's Sphere of Influence. Table 3-10 identifies the future planned urban and open space land uses within the city limits and Sphere of Influence.

As indicated by the General Plan, the City envisions that a majority of lands within the City's Sphere of Influence will be developed into urban land uses, including parks and open space reserves. It is not envisioned that agricultural uses will remain within ultimate City limits. Undeveloped land uses will be limited to open space designated within the Tracy Hills Community Area.

TABLE 3-10
City of Tracy Planned Land Uses (Acres)

	Urban Land Uses[a]	Open Space Lands[b]	Total Lands in Sphere of Influence
City of Tracy Sphere of Influence	22,183	3,552	25,735

Notes:
[a] Source: City of Tracy. 1998.
[b] Source: City of Tracy. 1993b. Consists of the following land uses: residential, commercial, industrial, public facilities, aggregate (mining), and parks. Does not include estimated land base for Tracy Hills development (2,938 acres).

Based on planned City of Tracy land uses, approximately 13,672 acres of existing agricultural and open space lands will be converted to urban land uses.

As part of implementing its General Plan, the City has adopted a series of policies designed specifically to guide future urban development and minimize potential impacts to the environment, existing agricultural land uses, and other community values. Table 3-11 summarizes these policies and specific implementation actions designed to achieve these planning goals.

TABLE 3-11
Land Use Goals and Implementation Actions

City of Tracy General Plan Land Use Goals and Policies	Implementation Actions
Goal LU 2: A city of distinct development areas, each consistent with an overall city character but with its own image and sense of place. Policy LU 2.1: Concentrate growth around Urban Centers and reduce reliance on auto oriented transportation by providing supportive land use patterns and non vehicular transportation modes.	LU 2.1.2: Allow mixed land uses vertically and horizontally. LU 2.1.3: Adopt guidelines to provide for clustering and land use integration.
Goal LU 3: Achieve interactive neighborhoods. Policy LU 3.3: Encourage mixed uses and higher	LU 3.3.3: Provide additional incentives for vertical development that preserves land while intensifying the land that is developed.

TABLE 3-11
Land Use Goals and Implementation Actions

City of Tracy General Plan Land Use Goals and Policies	Implementation Actions
density development.	
Policy LU 3.5: Further Tracy's self image by incorporating safe and sensitive treatment of hillsides.	LU 3.5.1: Establish a hillside development ordinance that defines standards for mass grading, ridgelines protection, erosion control, viewshed analysis, and other considerations.
Goal LU 4: Development of regional plans and programs.	LU 4.5.1: Through a specific plan process, identify priority locations for uses consistent with urban development, as well as locations best suited for public open space, wildlife habitat, active recreation, flood plain, agriculture, and slope zoning.
Policy 4.5: Plan for the conversion and development of areas in and around Tracy.	
Goal LU 7: Land use patterns that minimize conflicts between neighboring uses and transportation corridors.	LU 7.1.1: Transportation-related environmental impacts shall be evaluated as part of development and environmental review process.
Policy LU 7.1: Support location and mix of land use types and intensities that minimize conflicts with other uses and transportation corridors.	LU 7.2.1: Utilize CEQA to evaluate proposed developments' impacts on existing and projected development.
Policy LU 7.2: Environmental impacts generated by land development proposed within the Tracy area will be fully assessed, and wherever feasible, mitigated.	LU 7.3.1: Through proper site design and construction standards, minimize freeway related impacts on residential and commercial uses within ¼ mile of freeway corridor.
Policy LU 7.3: Locate compatible development near and along freeway corridors, and provide adequate environmental protection to less compatible uses.	LU 7.4.1: Site design should be evaluated for freeway oriented uses that attenuate noise and traffic impacts.
Policy LU 7.4: Implement freeway uses which are compatible with the noise, air quality and traffic impacts associated with freeways.	
Goal LU 8: Continue agriculture and resource extraction for as long as they can be conducted in an economically viable fashion.	LU 8.3.1: Require annual inspection, reporting, and bonding to ensure that mining is conducted in a manner consistent with adopted standards, and in conformance with General Plan.
Policy LU 8.3: Incorporate practices in mining activities that prevent public nuisances, hazards, and damage to property and environment.	LU 8.5.2: Provide land use buffers to separate agricultural land from land uses that are sensitive to agricultural practices.
Policy LU 8.5: Retain agricultural land in economically viable parcel sizes.	LU 8.5.3: Adopt a "Right to Farm" ordinance which contains performance standards for protection of farming uses from encroaching urban uses.

TABLE 3-11
Land Use Goals and Implementation Actions

City of Tracy General Plan Land Use Goals and Policies	Implementation Actions
Policy LU 8.6: Encourage incorporated urban development that is adjacent to existing City limits and complies with the Urban Centers and Community Areas concept.	LU 8.6.2: In order to discourage premature conversion of agricultural lands, the City will accept General Plan Amendments and Specific Plans for additional Community Areas/Urban Centers.
Policy LU 8.7: Guide development to maintain open space and agricultural areas.	LU 8.6.5: Development of any Community Area may proceed provided it meets the development criteria, consistent with the overall Urban Management Plan's intent and does not prematurely convert agricultural lands.
Policy LU 8.8: Protect agricultural lands needed for…preservation of open space, when consistent with overall Urban Management Plan's intent.	LU 8.7.1: Support the Williamson Act Contracts on non-urban designated lands.
	LU 8.8.1: Establish a Transfer of Development Rights or credits program conservation easement funding or other measures as encouragement to the preservation of agricultural land.

Source: City of Tracy, 1993b.

The San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP) is a 50-year plan that provides a strategy for balancing the need to conserve open space and the need to convert open space to non-open space uses. The SJMSCP provides compensation for the conversion of open space to non-open space uses that affect the plant, fish, and wildlife species covered by the SJMSCP.

The SJMSCP indicates that urban development is expected to occur in several areas within San Joaquin County, and specifically identifies the City as an area where development would occur. The SJMSCP also indicates that 109,302 acres of land currently in open space in the SJMSCP study area are anticipated to convert to non-open space uses between 2001 and 2051. The goal of the SJMSCP is to provide 100,841 acres of preserves based on conversion of the 109,302 acres, and the SJMSCP anticipates acquiring land primarily through conservation easements and fee title (SJCOG, 2000).

Biological Resources

Lands within the WSID service area and City of Tracy Sphere of Influence support a variety of lands uses and habitats. These habitats, in turn, support a variety of plant and wildlife species that either reside or utilize portions of these habitats. Table 3-12 summarizes the land use / habitats found in the project area and describes the species associated with them.

TABLE 3-12
Description of Land Use/Habitats in WSID and City of Tracy Water Service Areas

Land Use/Habitat	Vegetation and Wildlife Characteristics
Pasture	Pasture habitat consists of irrigated lands dominated by grasses and legumes, and sometimes alfalfa (where the practices consist of occasional tilling of soil and mowing of vegetation). Field margins support ruderal invasive species such as wild oats (*Avena* sp.), yellow-star thistle (*Centaurea solstitialis*), ripgut brome (*Bromus diandrus*), wild radish (*Raphanus saticus*), and mustards (*Brassica* spp.). The vegetation composition of pastures varies with management practices, affecting the abundance and composition of wildlife. Irrigated pasture provides foraging and roosting opportunities for shorebirds and wading birds, including Great Egret (*Casmerodius albus*), Great Blue Heron (*Ardea herodias*), Black-Bellied Plover (*Pluvialis spuatarola*), Mountain Plover (*Charadrius montanus*), Killdeer (*Charadrius vociferus*), Long-Billed Curlew (*Numenius americanus*), and White-Faced Ibis (*Plegadis chihi*).
Orchard/Vineyard	Orchard-vineyard habitat consists of cultivated fruit or nut-bearing trees and grapevines. This habitat is planted in a uniform pattern and is intensively managed. Understory vegetation is usually sparse; however, in some areas, grasses are allowed to grow between vineyard rows to reduce erosion. Wildlife species associated with vineyards include harvest mouse (*Reithrodontomys megalotis*), black-tailed jackrabbit (*Lepus californicus*), and mourning dove (*Zenaida macroura*). The nut crop from orchards provides feed for American Crows (Corvus brachyrhynchos), Scrub Jay (*Aphelocoma coerulescens*), Northern Flicker (*Colaptes auratus*), Lewis' Woodpecker (*Melanerpes lewis*), Yellow-Billed Magpie (*Pica nuttalli*), American Robin (*Turdus migratorius*), Northern Mockingbird (*Mimus polyglottos*), western gray squirrel (*Sciurus griseus*), raccoon (*Procyon lotor*), and mule deer (*Odocoileus hemionus*).
Row Crops	Row crops include cannery tomatoes, dry beans, and a small quantity of melons. Intensive management and the use of chemicals to control insect pests in row crops limit their use by wildlife. Rodent species that forage in row crops include the California vole (*Microtus californicus*), deer mouse (*Peromyscus maniculatus*), and California ground squirrel (*Spermophilus beecheyi*). These rodent populations are preyed on by raptors such as Swainson's Hawk (*Buteo swainsoni),* Red-Tailed Hawk (*Buteo jamaicensis*), White-Tailed kite (*Elanus caeruleus*), and Northern Harrier (*Circus cyaneus*).
Shrub and Brush/Mixed Rangeland	Within the WSID and City water service areas, there are fragmented patches of other uses such as rural developed, mined, or government lands, that have been designated as barren land alkali desert scrub (CDFG 1998). The shrub and brush rangeland is dominated by woody vegetation and is typically found in semiarid regions. Mixed rangelands are ecosystems where more than one-third of the land supports a mixture of herbaceous species and shrub or brush rangeland species. Herbaceous rangelands are dominated by native and non-native grasses and forbs are the principal cover. Animals relatively tolerant of disturbance can typically be found in these areas, such as black-tailed jackrabbit, red-tailed hawk, and rodents.
Annual Grassland	Grassland vegetation is characterized by a predominance of annual or perennial grasses in an area with few or no trees and shrubs. This vegetation type is dominated by non-native annual grasses including wild barley, soft chess, red brome, ripgut brome and wild oats. Native plants comprise a minor portion of the cover and include rancher's fireweed (*Amsinckia meniesii* var. intermedia), common goldfields (*Lasthenia fremontii*), buckwheat (*Eriogonum nudum*), popcorn flower (*Cryptantha* sp.) and brodiaeas (*Triteleia laxa* and *Dichelostemma capitatum*). Grasslands produce large numbers of seeds, an important and reliable food source for numerous seed-eating birds. Raptors such as black-shouldered kite and red-tailed hawk cruise the grasslands, preying on these birds and small mammals. Mammals relying on grassland communities include both species that forage on seeds and leaves, such as voles, gophers, and mice, and carnivores such as coyotes and foxes that prey on them. Some mammals construct burrows or dens that, when abandoned, are used by birds such as the burrowing owl or certain reptiles and amphibians. Only a few species of reptiles and amphibians are found in grasslands because the low structural diversity provides few sources of refuge other than mammal burrows. Common reptiles and amphibians of grasslands include the western fence lizard (*Sceloporus occidentalis*), common kingsnake (*Lampropeltis getulus*), western rattlesnake (*Crotalus viridis*), gopher snake (*Pituophis melanoleucus*), common garter snake (*Thamnophis sirtalis*), western toad (*Bufo boreas*), and western spadefoot toad (*Scaphiopus hammondii*).

TABLE 3-12
Description of Land Use/Habitats in WSID and City of Tracy Water Service Areas

Land Use/Habitat	Vegetation and Wildlife Characteristics
Riparian Lands	The Corral Hollow Creek watershed is at the southernmost section of the City's Sphere of Influence. Portions of the middle and upper reaches of the creek support relatively intact stands of riparian vegetation consisting of Great Valley riparian forest and Great Valley valley oak riparian forest with patches of Great Valley riparian scrub. Corral Hollow supports or provides potential habitat for numerous species including the California red-legged frog, foothill yellow-legged frog, western pond turtle, silvery legless lizard, western spadefoot toad, Swainson's Hawk, riparian woodrat, and brush rabbit. The Multi-Species Habitat Management Plan prepared for the Tracy Hills Development Project designates the Corral Hollow Creek corridor as a regional park (PMC, 1997). Red willow (*Salix laevigata*) and Fremont cottonwood (*Populus fremontii*) are found in riparian woodland communities along Corral Hollow Creek. Shrubs present within the riparian corridor include mulefat (*Baccharis viminea*) and tree tobacco (*Nicotiana gluaca*). Grazing activities and human access have greatly diminished understory vegetation diversity along Corral Hollow Creek.
Sacramento-San Joaquin Delta	BCID is located within the Sacramento-San Joaquin Delta (Delta). The City is not within the Delta, but the Delta may be affected by the planned urbanization in the City because the assigned water that would be delivered to the City would supply the urban areas, and the urban areas would, in turn, generate wastewater that would eventually be discharged to the Delta. The Delta is within the jurisdiction of six counties (Alameda, Contra Costa, Sacramento, San Joaquin, Solano, and Yolo). It comprises a 738,000-acre area that forms the lowest part of the Central Valley, lying between the Sacramento and San Joaquin rivers and extending from the confluence of the two rivers inland as far as Sacramento and Stockton. The Delta is interlaced with about 700 miles of waterways and receives runoff from over 45 percent of the state's land area. It also receives flows from several major tributaries, including the Sacramento, Feather, Yuba, Bear, American, Merced, San Joaquin, Mokelumne, Cosumnes, Stanislaus, Tuolumne, and Calaveras rivers. The Delta supports roughly 90 fish species. It serves as a migratory route and nursery for chinook salmon, striped bass, white and green sturgeon, American shad, and steelhead trout. These adadromous fishes spend most of their adult lives either in the lower bays of the estuary or in the ocean. The Delta is a major nursery area for most of these species. Other fishes in the estuary include delta smelt, Sacramento splittail, catfish, largemouth bass, black bass, crappie, and bluegill. The Delta provides habitat for a wide variety of freshwater, estuarine, and marine fish species. Channels in the Delta range from dead-end sloughs to deep, open water areas and include a scattering of flooded islands that provide submerged vegetated cover.

Sources: Reclamation, 2001; Pacific Municipal Consultants, 1997; San Joaquin Council of Governments, 2000.

Special-Status Species

Lands and habitats in WSID and City water service areas potentially support several wildlife species designated in accordance with the federal Endangered Species Act or the California Endangered Species Act. These acts provide for the protection and special management of designated species and their habitats. Seven plant species, 10 fish species, 7 invertebrate species, 9 reptile and amphibian species, 22 bird species, and 5 mammal species considered special-status potentially occur within the WSID and City of Tracy water service areas.

Appendix B presents a Biological Assessment addressing the Proposed Action. It identifies the species designated in accordance with either federal or state law that could potentially be found within the WSID and City water service areas or immediate vicinity. This list includes fish species found in waterways of the Sacramento-San Joaquin Delta (although not

located in the WSID and City water service areas) because the City discharges treated effluent to the Delta, resulting in those habitats being a part of the affected environment.

Wetlands

Executive Order 11990 (E.O. 11990), signed on May 24, 1977, provides for the protection of wetlands. It directs that, agencies, in carrying out their land management responsibilities, are to take action that will minimize the destruction, loss, or degradation of wetlands, and take action to preserve and enhance the natural and beneficial values of wetlands.

Each agency shall avoid undertaking or assisting projects in wetlands, unless the agency determines that there is no practicable alternative to the action and measures to minimize harm are included.

A wetlands delineation was not performed for the Proposed Action. It is likely that few wetlands exist within WSID because all lands within the district are cultivated in agricultural production. Wetlands, if they exist in WSID, would likely occur in agricultural drainage areas.

Wetlands once existed in the City service area; however, they were drained and converted to agricultural lands in the early 1800s (City of Tracy, 1993a).

Cultural Resources

The Area of Potential Effect (APE) of the Proposed Action consists of the contract service area for both WSID and the City of Tracy (City limits), within which the water assignment from WSID will be used (Figure 1-2).

Information Sources and Background Data

This section provides a brief overview of environmental, prehistoric, ethnographic, and historic context for the City of Tracy. Much of this background information derives from anthropological, archaeological, and historic studies conducted over the past several decades on both public and private lands within the City's service area. Also discussed are the types of cultural resources known or suspected of being present within the service area.

To obtain information concerning the types and general distribution of known archaeological and historic sites and to estimate whether additional such sites may remain undiscovered within the service area, the following sources were consulted:

- A search of archaeological surveys, site, and other records and documents maintained by the California Historical Resources Information System, Central California Information Center (CSU-Stanislaus) (CCIC#4287I, July 24, 2001)
- A review of select published and unpublished archaeological, ethnographic, and historic reports and documents available for the WSID and City water service areas
- A review of the National Register of Historic Places (NRHP) (United States Department of the Interior 1996, and Updates)
- The California Register of Historical Resources (1998)
- The California Inventory of Historic Resources (1976)

- The California Historical Landmarks (1996)
- The California Points of Historical Interest listing (May 1992 and updates)
- The Historic Property Data File (Office of Historic Preservation current list)
- The CALTRANS Local Bridge Survey (Mikesell, 1990)

Natural Environment Context

The City of Tracy is located along the western margin of the San Joaquin Valley at its interface with the lower reaches (eastern margin) of the Diablo Range. The immediate area of the City contains only a limited number of water sources issuing from the Diablo Range. However, a number of substantial natural surface water sources are located a short distance north of Tracy in the form of Old and Middle Rivers, Tom Paine Slough, and the San Joaquin River. In addition to water, additional resource zones are present around Tracy, both in association with and independent of natural surface water sources (Kuchler, 1977).

Prehistoric use and occupation focused on these various resource areas, particularly around the confluences of streams and within the ecotones created at the interface of foothill / valley lands. Drainages and associated natural levees and benches were moderately to intensively utilized, while uplands were visited for oak and other resources on a more seasonal basis.

Virtually all of the land area around Tracy has been affected by ranching for over 150 years and by intensive agriculture during the past 50 to 100 years. More recent impacts derive from construction of water distribution facilities (the DMC proceeds adjacent to the west side of Tracy), major transportation routes (Tracy is bounded by Interstates 5, 205, and 580), and intensive agriculture, residential, and commercial development.

Prehistoric Context

The San Joaquin Valley area generally, inclusive of the City of Tracy, has a long and complex cultural history with distinct regional patterns that extends back more than 11,000 years. The first generally agreed-upon evidence for the presence of prehistoric peoples in the area is represented by the distinctive fluted spear points (e.g. Heizer, 1938), some resembling Clovis Points, found on the margins of extinct lakes in the San Joaquin Valley. The Clovis points are found on the same surface with the bones of extinct animals such as mammoths, sloths, and camels. Based on evidence from elsewhere, the ancient hunters who used these spear points existed during a narrow time range between about 10,900 BP and 11,200 BP (Moratto, 1984).

The next cultural period represented, the Western Pluvial Lakes Tradition, thought by most to be subsequent to the Clovis period, is another widespread complex that is characterized by stemmed spear points. This poorly defined early cultural tradition is regionally known from a small number of sites in the Central Coast Range, San Joaquin Valley lake margins, and Sierra Nevada foothills. The cultural tradition is dated to between about 8,000 and 10,000 years ago and its practitioners may be the precursors to the subsequent cultural pattern.

About 8,000 years ago, many California cultures shifted the main focus of their subsistence strategies from hunting to seed gathering as evidenced by the increase in food-grinding implements found in archaeological sites dating to this period. This cultural pattern is best

known for southern California, where it has been termed the Milling Stone Horizon (Wallace, 1954, 1978a), but subsequent research suggests that the horizon may be more widespread than originally described and is found throughout the Valley (Moratto, 1984), with some radiocarbon dates suggesting a maximum range between about 8,000 and 2,000 BP, but with most clustering between about 6,000 to 4,000 BP.

Cultural patterns as reflected in the archaeological record, particularly specialized subsistence practices, became codified within the last 3,000 years. The archaeological record becomes more complex, as specialized adaptations to locally available resources were developed and populations expanded. Many sites dated to this time period contain mortars and pestles and/or are associated with bedrock mortars implying the intense exploitation of the acorn. The range of subsistence resources utilized and exchange systems expanded significantly from the previous period. Along the coast and in the Central Valley, archaeological evidence of social stratification and craft specialization is indicated by well-made artifacts such as charmstones and beads, often found as mortuary items. Ethnographic lifeways serve as good analogs for this period.

Ethnographic Context

The WSID and City water service areas are located with the northern one-third of lands claimed by the Penutian-speaking Northern Valley Yokuts at the time of initial contact with European American populations *circa* AD 1850 (Kroeber, 1925; Wallace, 1978b). These Yokuts occupied an area extending from the crest of the Coast Diablo Range easterly into the foothills of the Sierra Nevada, north to the American River, and south to the upper San Joaquin River.

The basic social unit for the Yokuts was the family, although the village may also be considered a social, as well as a political and economic unit. Often located on flats adjoining streams, villages were inhabited mainly in the winter because it was necessary to go out into the hills and higher elevation zones to establish temporary camps during food-gathering seasons (i.e., spring, summer, and fall). Villages typically consisted of a scattering of small structures, numbering from four or five to several dozen in larger villages, each house containing a single family of from three to seven people. Larger villages, with from twelve to fifteen or more houses, might also contain an earth lodge.

As with most California Indian groups, economic life for the Yokuts revolved around hunting, fishing, and collecting plants, with deer, acorns and avian and aquatic resources representing primary staples. The Yokuts used a wide variety of wooden, bone, and stone artifacts to collect and process their food, and were very knowledgeable of the uses of local animals and plants and the availability of raw material sources which they used to manufacture an immense array of primary and secondary tools and implements. However, only fragmentary evidence of their material culture remains, due in part to perishability and in part to impacts to archaeological sites resulting from later (historic) land uses.

Resource Considerations, Native American Sites

The discussion of regional prehistory and ethnography provides insight into the types of Native American sites already known or likely to be present within the WSID and City water service areas, with the most frequently occurring types including the following:

- Large village sites located along the margins of all permanent streams, particularly at confluences, and other natural surface water sources (springs, marshes and other wetlands). Additional large village sites have been documented along smaller stream courses, especially where streams merge, and particularly at the interface between major ecotones
- Surface scatters of lithic artifacts without buried cultural deposits, resulting from short-term occupation and/or specialized economic activities
- Petroglyphs, often in the form of cupped boulders, at or close to village sites or encampments
- Bedrock food-processing (milling) stations, including mortar holes and metate slicks
- Trails, often associated with migratory game animals
- Mortuary sites, often but not exclusively associated with large village complexes
- Isolated finds of aboriginal artifacts and flakes

Historic Context

Interior California was initially visited by Anglo-American fur trappers, Russian scientists, and Spanish-Mexican expeditions during the early part of the twentieth century. These early explorations were followed by a rapid escalation of European-American activities, which culminated in the massive influx fostered by the discovery of gold at Coloma in 1848.

Early Spanish expeditions arrived from Bay Area missions as early as 1804, penetrating the northwestern San Joaquin Valley (Cook, 1976). By the mid-1820s, hundreds of fur trappers were annually traversing the valley on behalf of the Hudson's Bay Company (Maloney, 1945). By the late 1830s and early 1840s, several small permanent European-American settlements had emerged in the Central Valley and adjacent foothill lands, including ranchos in the interior Coast Range.

With the discovery of gold in the Sierra Nevada, large numbers of European-Americans, Hispanics, and Chinese arrived in and traveled through generally the WSID and City water service areas. The mining communities' demand for hard commodities led quickly to the expansion of ranching and agriculture throughout the Great Central Valley and the interior valleys of the Coast Range. Stable, larger populations arose and permanent communities slowly emerged in the Central Valley at this time, particularly along major transportation corridors. Of particular importance was the transformation brought about by construction of railroad lines.

The Southern Pacific and Central Pacific Railroads and a host of smaller interurban lines to the northeast around the city of Stockton began intensive projects in the late 1860s. By the turn of the century, nearly 3,000 miles of lines connected the cities of Modesto and Stockton with points south and north. Many of the valley's larger cities, including many in San Joaquin and adjacent counties, were laid out as isolated railroad towns in the 1870s and 1880s by the Southern Pacific, which not only built and settled, but continued to nurture the infant cities until settlement was successful. The Southern Pacific main line proceeds

through and in fact branches in the City of Tracy and a substantial repair and maintenance facility was located in Tracy after the turn of the century.

Intensive agricultural development soon followed initial rail construction because railroads provided the means for bulk product to be transported to a much larger market. By the end of the twentieth century, a substantial portion of the valley was being intensively cultivated, with increasing mechanization occurring through all of the twentieth century and substantial expansion of cultivated acreage with the arrival of water from the CVP.

Resource Considerations, Historic Resources

Historic overviews for the region generally, and the City of Tracy in particular, document the presence of a wide range of historic site and feature types and complexes, with types known or most likely to be present with the WSID and City water service areas including the following:

- Historic railroads and railroad alignments and railroad station
- Two-track historic trails / wagon roads and now-paved historic road corridors
- Water distribution systems, including levees and small and large ditch, canal, and channel systems
- Occupation sites and homesteads and associated features such as refuse disposal sites, privy pits, barns, and sheds
- Commercial undertakings and associated buildings and structures
- Refuse disposal site(s) associated with historic Tracy and Carbona
- Ranch features, including structures, structural remnants, stock ponds, and corrals

Current Inventory of Cultural Resources

A total of 56 archaeological and historic sites and buildings are currently documented within the WSID and City water service areas. These include sites that contain exclusively prehistoric material, sites with only historic material or structures, and sites with mixed prehistoric / historic components.

Prehistoric sites are represented by large habitation areas (village sites) in which both habitation and special-use activity areas are represented; mortuary sites or individual inhumations, most associated with habitation sites; and specialized food-procurement and food-processing sites including milling areas.

Historic sites are represented by a wide range of types, including buildings and structures dating to the 19th and 20th centuries; historic transportation features including rail, cart paths, and vehicular roadways; water distribution systems; homesteads and early historic ranches with associated features such as refuse disposal areas, privy pits, barns, and sheds; historic-period disposal sites associated with the historic communities of Tracy and Carbona; and ranch complexes.

Some of these prehistoric and historic sites have been determined eligible for inclusion on the NRHP through consultation between a federal agency and the State Historic

Preservation Office (SHPO) and through formal nomination. Others remain unevaluated in relation to NRHP eligibility criteria.

In addition to documented cultural resources, it is clear that both prehistoric and historic sites remain undiscovered within the WSID and City water service areas simply because formal archaeological inventory surveys have never been undertaken within portions of the present WSID and City water service areas.

Issues Identified

The primary issues involving cultural resources include (a) what types of archaeological and historic sites are present within the WSID and City water service areas that could be affected by the undertaking, (b) what is the basis for determining the significance or importance of identified sites, (c) what effects might the undertaking have on important or significant sites located within the WSID and City water service areas, and (d) what steps might be taken to avoid, minimize, or mitigate any adverse impacts to such significant sites.

The identification of archaeological sites was resolved through (a) evaluation of existing records and documents, including archaeological survey reports and archaeological site documents on file at California Historical Resources Information Center and elsewhere, (b) archaeological and historic overviews of the area, and (c) the results of previous consultation with Native American groups and historic societies as documented in existing reports and files at the California Information Center.

The significance or importance of archaeological sites located within the WSID and City water service areas has been addressed by using established procedures outlined in 36 CFR 60.4 and discussed below.

The final cultural resource issue concerns possible impacts to archaeological and historic sites that might be determined eligible or potentially eligible for listing on the NRHP and how best to minimize or reduce such possible impacts to less than adverse levels.

Regulatory Setting

Evaluation of the potential impacts of an undertaking to archaeological and historic sites must conform with Section 106 of the National Historic Preservation Act and its implementing regulations (36 CFR Part 800), Section 2(b) of Executive Order 11593, Section 101(b)(4) of NEPA, the Archaeological Resources Protection Act, the Native American Grave Protection and Repatriation Act of 1990 (where Federal lands are involved), and other rules and regulations, including applicable State laws (esp. CEQA, Guidelines [as amended October 1998]). Reclamation is responsible for ensuring compliance with the federal laws, rules and regulations.

Significance or Importance of Cultural Resources

According to federal regulations and guidelines, significant or important cultural resources are those prehistoric and historic sites, districts, buildings, structures, and objects, as well as properties with traditional religious or cultural importance to Native Americans, that are listed or are eligible for listing on the NRHP (historic properties), according to the criteria outlined in 36 CFR 60.4. Historic properties must possess integrity of location, design, workmanship, feeling, and association and must meet at least one of the following criteria:

- Associated with events that have made significant contributions to the broad patterns of United States history
- Associated with the lives of people significant in United States history
- Embody the distinctive characteristics of a type, period, or method of construction; or represent the work of a master, or possess high artistic value or represent a significant and distinguishable entity whose components may lack individual distinction
- Has yielded or is likely to yield information important in prehistory or history

Archaeological sites with "cultural" or traditional value are evaluated under guidelines prepared by the Advisory Council on Historic Preservation entitled *Guidelines for Consideration of Traditional Cultural Values in Historic Preservation Review* (National Park Service, 1985). The guidelines define *cultural value* as "...the contribution made by an historic property to an on-going society or cultural system. A traditional cultural value is a cultural value that has historical depth." The guidelines further specify that "[a]...property need not have been in consistent use since antiquity by a cultural system in order to have traditional cultural value."

As noted above, although numerous archaeological and historic sites have been documented within the WSID and City water service areas, not all of them have been formally evaluated for NRHP eligibility. As well, intensive-level pedestrian surveys have been undertaken within only a portion of the WSID and City water service areas.

Socioeconomic Resources

Population

The estimated Year 2000 population of the City of Tracy is about 56,929 (U.S. Census Bureau, 2000a), representing approximately 10 percent of the San Joaquin County population (SJCOG, 2001). This population is concentrated in an urban environment composed of residential, commercial, and industrial land uses.

The total population residing within the WSID service area is estimated to be about 1,400 people. This population is located in a rural environment composed of agricultural land uses (U.S. Census Bureau, 2000b).

The populations of the small agricultural communities within San Joaquin County can be expected to increase during the agricultural season, due to the influx of seasonal farm workers.

Future Population Growth

The City's General Plan would provide for a maximum population of 162,345 persons at build-out (City of Tracy, 1993a). Based on the rates of growth projected by San Joaquin Council of Governments (SJCOG), the population of Tracy is estimated to reach 137,341 persons by 2025.

The City of Tracy controls residential development through the issuance of Residential Growth Allocations (RGAs) in accordance with a Growth Management Ordinance (GMO). The purpose of issuance of RGAs and enactment of the GMO is to control growth not able to

be supported by public services and infrastructure (Economic and Planning Systems, Inc., 2001). The City is required to find that sufficient public services and infrastructure are or will be available to support the proposed residential units.

Measure A amended provisions of the GMO, as passed by City of Tracy voters on November 7, 2000. The purpose of Measure A is to further control residential development compatible with the installation of public services and infrastructure (City of Tracy, 2000b). The effect of Measure A is expected to include a reduction in residential development through 2013, the degree to which is dependent on market conditions (Economic and Planning Systems, Inc., 2001).

Table 3-13 presents projected population growth from SJCOG estimates for the City of Tracy and San Joaquin County. Planned growth is expected to result in the development of residential, commercial and industrial uses within the Sphere of Influence.

TABLE 3-13
Projected Future Population Growth in City of Tracy

	2005	2010	2015	2020	2025
City of Tracy	70,828	87,456	104,084	117,788	137,341
San Joaquin County	633,348	700,095	766,843	821,851	900,338

Source: SJCOG, 2001.

Future population growth within WSID's service area is not expected to increase substantially over the existing population numbers and would retain its existing rural character over the foreseeable future; except those lands within both the WSID service area and the City of Tracy Sphere of Influence. This latter category of lands is planned to be converted to an urban environment as part of the City's planned growth.

Employment

As of 2000, the annual average civilian labor force for the County of San Joaquin was reported to be 260,900 persons with an unemployment rate of 8.8 percent. Services, government, and retail trade account for the majority of employment in the County, estimated to employ 58 percent of the County's workforce. Growth in these industries is projected for the County. In addition, the Employment Development Department (EDD) finds that the County is likely to become an "industrial center" in the region. Although San Joaquin County ranks in the top ten agricultural producing counties in the nation, agriculture accounts for 8.5 percent of employment EDD, 2001).

The City of Tracy General Plan indicates that total employment opportunity based on planned growth was estimated to result in an additional approximately 153,000 jobs at build-out conditions (City of Tracy, 1993b). Based on growth projections developed by SJCOG, the number of jobs in Tracy is estimated to be 24,028, as shown in Table 3-14. SJCOG projects that most Tracy residents will be employed outside of the City.

TABLE 3-14
Projected Employment for City of Tracy (Number of Jobs)

	2000	2005	2010	2015	2020	2025
City of Tracy	17,089	18,477	19,865	21,253	22,640	24,028
San Joaquin County	201,671	218,051	234,430	250,810	267,189	283,569

Source: SJCOG, 2001.

Indian Trust Assets

Indian Trust Assets (ITAs) are legal interests and property held in trust by the United States for Indian tribes or individuals, or property that the United States is charged by law to protect for Indian tribes or individuals. All federal bureaus and agencies share a duty to act responsibly to protect and maintain ITAs. A review of Reclamation's Geographic Information System for ITAs (Indian reservations, rancherias, or public domain allotments) within the City of Tracy and WSID revealed that there are no ITAs within the project area (Patrick Welch, pers. comm. 2001).

Environmental Justice

As mandated by Executive Order 12898 (E.O. 12898), published February 11, 1994, entitled, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations", this IS/EA addresses potential environmental justice concerns. The specific requirements of E.O. 12898 require federal agencies to identify and address disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority populations and low-income populations. In August 1994, the Secretary of the Interior issued an environmental justice policy statement directing departmental action resulting in Interior's Strategic Plan for Environmental Justice.

Table 3-15 presents demographic information available for the City of Tracy, based on the 2000 Census. As presented, the majority of the population is of European descent, followed by approximately 28 percent of the population being of Hispanic origin.

TABLE 3-15
Ethnic Character in the City of Tracy

Ethnic Group	City of Tracy Population	Percent of Total
Total Population	56,929	100
Hispanic Origin (of any race)	15,765	27.7
Not Hispanic or Latino	41,164	72.3
One Race:	38,934	68.3
White	30,723	54
Black	2,976	5
American Indian	297	0.5
Asian	4,481	8
Pacific Islander	275	0.5
Other Race	182	0.3
Two or More Races	2,230	4

Source: U.S. Census Bureau, 2000a.

The demographic character of the WSID service area is predominately composed (71 percent) of Caucasians. The remaining 29 percent of the population residing in the WSID service area consists of other ethnic groups, primarily comprised of people of Hispanic origin (U.S. Census Bureau, 2000b).

SECTION 4

Environmental Consequences/Commitments

Introduction

This section describes the environmental consequences of implementing the Proposed Action and the No Action Alternative. Changes to the natural and human environments that would result from the Proposed Action and No Action Alternative were evaluated relative to the existing environmental conditions described in Section 3. Section 5 of this document identifies measures that have been previously adopted by the City of Tracy to mitigate potential impacts to biological and cultural resources resulting from implementation of the City's General Plan and other facilities associated with urban growth.

Effects of the Proposed Action

Water Resources

Implementation of the Proposed Action would have a significant impact on water resources (water quantity, groundwater, and water quality) if it would:

- Cause substantial flooding or erosion
- Adversely affect any water body, such as a stream, lake, or bay
- Adversely affect surface water or groundwater quality or quantity

No flooding, erosion, or other hydrologic hazards would result from implementation of the Proposed Action. The Proposed Action would not involve construction of new facilities that would be prone to flooding, induce erosion, or affect any water body. Implementation of the Proposed Action would have no effect on designated floodplains or result in exposing populations or structures to known flood hazard potential.

Implementation of the Proposed Action would, however, provide a benefit by helping to reduce the shortfall in water supply under which the City is expected to operate in the future. Although the proposed water assignment is for up to 5,000 af, the average annual supply will be closer to 3,000 af because the water supply from the assignment would be subject to agricultural shortages. Implementing the Proposed Action would also put to beneficial use water that is surplus to WSID's needs.

Because there are no district wells or private irrigation wells within WSID, groundwater would not be affected by implementation of the Proposed Action. Use of the assigned water, as part of the Proposed Action, would eliminate the need for further development of local groundwater supplies to meet future City water demand, therefore, the Proposed Action would assist in minimizing future groundwater level declines and associated saline water intrusion from the Delta.

Only a minor amount of agricultural water from WSID is currently discharged to Old River. With implementation of the Proposed Action, this agricultural water would not be

discharged by WSID. Instead the water would be delivered to the City service area, then treated and used primarily for M&I purposes. After M&I use, the City would discharge the treated wastewater effluent to the Old River. The discharge of treated wastewater effluent would not result in a significant adverse impact on Old River water quality because the effluent would meet applicable water quality requirements assigned by the California Regional Water Quality Control Board.

Implementation of the proposed assignment of water from WSID to the City would not change the quantity of water that would be conveyed through the DMC. Implementation of the Proposed Action would divert the water from the DMC to the City about 2 miles downstream of WSID's current turnout location, resulting in water remaining in the DMC for an additional 2 miles.

Land Use

Implementation of the Proposed Action would have a significant impact on land use if it would:

- Result in proposed project features being incompatible with existing land uses.
- Result in lands being taken out of agricultural production that are designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance.
- Result in proposed project features conflicting with the objectives, goals, or policies of the City of Tracy General Plan.

Implementation of the Proposed Action would not change existing land uses either in the WSID or City service areas. Land uses are planned to change in the City as a result of implementing the City's existing General Plan. Approximately 13,672 acres of existing agricultural lands will be converted to urban land uses (consisting of residential, commercial, and industrial land uses). This land conversion is expected to occur regardless of implementation of the Proposed Action.

Implementation of the Proposed Action would not require the construction of new facilities that would require agricultural lands to be converted to urban land uses. Therefore, Prime Farmland, Unique Farmland, or Farmland of Statewide Importance would not be affected as a result of implementing the Proposed Action.

The Proposed Action would not result in new facilities being constructed. Therefore, no conflicts with the objectives, goals, or policies of the City's General Plan would occur. In fact, implementation of the Proposed Action would aid the City in accommodating its planned future growth (as called for by the City General Plan) by providing needed water supply to meet future water demand.

Assigning up to 5,000 af of CVP water to the City would not result in water supply deficiencies in the WSID service area, which, in turn, could affect land uses in the WSID service area. As shown in Table 3-4, WSID has routinely transferred over 2,600 af of water that is surplus to in-District needs. Therefore, no effects on water-dependent land uses (e.g., agricultural production) would occur.

Biological Resources

Implementation of the Proposed Action would have a significant impact on biological resources if it would:

- Affect any species identified as a candidate, sensitive, or special status in local or regional plans, policies, or regulations, or by the California Department of Fish and Game, U.S. Fish and Wildlife Service, or National Marine Fisheries Service
- Affect habitat used by candidate, sensitive, or other special-status species
- Diminish the habitat value of state or federally recognized habitat or other sensitive natural communities through physical modification to such areas
- Remove, fill, or cause hydrologic interruption of federally protected wetlands such that wetland function was reduced or diminished
- Interfere with the movement of fish and wildlife through water or land corridors used for migration by removal, obstruction, or physical changes so that use by fish and wildlife would be diminished
- Obstruct or diminish the quality or quantity of native nursery habitat
- Hinder implementation of the adopted San Joaquin County Multi-Species Habitat and Open Space Plan (SJMSCP), Tracy Hills Habitat Conservation Plan (under development), or other approved local, regional, or state policies or ordinances protecting biological resources, including the ability to establish identified habitat preserves

No effects on wetlands, vegetation, wildlife, or fish resources are expected to occur as a result of implementing the Proposed Action. Because the Proposed Action would not result in the construction or modification of facilities, it would not interfere with fish or wildlife movement, nor diminish habitat. Project operation, including the amount, timing and reliability of WSID's CVP water contract deliveries, would not change as a result of the proposed water assignment to the City, and no habitat disturbance to plants, fish, and wildlife would occur as a result of implementing the Proposed Action.

Cultural Resources

Impacts to archaeological and historic sites occur from activities affecting the characteristics that qualify a property for inclusion on the NRHP. Significant impacts are those considered to have an adverse effect on historic properties. Adverse effects include, but are not limited to:

- Physical destruction, damage, or alteration of all or part of a historic property
- Isolation of a historic property or alteration of the character of its setting when that character contributes to the property's eligibility for the NRHP or its cultural significance
- Introduction of visual, audible, or atmospheric elements that are out of character with the property or that alter its setting

According to federal regulations and guidelines, significant or important cultural resources are those prehistoric and historic sites, districts, buildings, structures, and objects, as well as properties with traditional religious or cultural importance to Native Americans, that are listed or are eligible for listing on the NRHP, according to the criteria outlined in 36 CFR 60.4. Historic properties must possess integrity of location, design, workmanship, feeling, and association, and must meet certain criteria.

Important archaeological sites within the Area of Potential Effect (APE) include documented and undocumented prehistoric and historic sites and features, and buildings and structures, some of which may contain subsurface (buried) accumulations of cultural material. Although numerous archaeological and historic sites have been documented within the APE, not all of them have been formally evaluated for NRHP eligibility. In addition, intensive-level pedestrian surveys have been undertaken within only a portion of the APE. Although archaeological and historic sites have been documented within the APE, continuation of existing land uses is not considered adverse.

Increases of available water supply to the City would not result in impacts to eligible or potentially eligible prehistoric or historic sites or districts within the APE. This is because the Proposed Action is within the range of "existing conditions" with respect to land use. The Proposed Action would not alter (1) the types of uses that are permitted under the existing water delivery contract between WSID and Reclamation, (2) the range of river flows, and (3) reservoir fluctuations. No additional infrastructure would be constructed, and there would be no increase in overall water deliveries. Therefore, no impacts on cultural resources are expected.

Socioeconomic Resources

Population, Future Population Growth, and Employment

Implementation of the Proposed Action would have a significant impact on population levels and growth and employment if it would:

- Cause an increase in population that is substantial in relation to the existing population
- Cause a temporary or permanent decline in employment that is substantial in relation to existing employment levels

Implementation of the Proposed Action would have no effect on existing populations levels, future population growth, and employment levels in the City. Therefore, implementation of the Proposed Action would not be considered growth inducing, as discussed in Section 5 of this document. Development would continue to occur that was identified in the City's General Plan. This growth would, in turn, result in significant unavoidable impacts (after mitigation is implemented) that were identified in the City's General Plan EIR. That EIR identified significant unavoidable impacts on: agricultural uses, biological resources, traffic and circulation, air quality, noise, land use, and visual and aesthetic resources. Implementation of the Proposed Action would not contribute to impacts that were not previously addressed.

Implementation of the Proposed Action would not cause land conversions from agricultural to urban uses. As indicated in Section 3 of this document, the City General Plan provides for

growth of the City, and SJCOG projects population levels to increase substantially through 2025. This growth is expected to occur regardless of whether the Proposed Action is implemented.

Current law, as amended with passage of SB 610, requires that local land management agencies identify water supplies sufficient to serve associated populations when considering certain residential development projects. Therefore, the Proposed Action would enable the City to permit future residential development projects that can be served with water acquired with the proposed water assignment.

Implementation of the Proposed Action would also have no effect on population, growth, or employment in WSID. As lands within the overlap area of WSID and the City detach from WSID and urbanize, the number of agricultural-related jobs within the WSID service area may be reduced. However, the urbanization of these lands is independent of the Proposed Action and may be expected to occur regardless of whether the Proposed Action is implemented.

Indian Trust Assets

Implementation of the Proposed Action would have a significant impact on Indian Trust Assets (ITAs) if it would:

- Adversely affect the United States' trust responsibility to protect and maintain rights reserved by, or granted to, American Indians or individual through treaties, federal statutes, and executive orders.

As indicated in Section 3, no ITAs have been identified in either the WSID or City of Tracy service areas. Therefore, implementation of the Proposed Action or the No Action Alternative would have no impact on ITAs.

Environmental Justice

Implementation of the Proposed Action would have a significant impact if it would cause a disproportionate adverse impact on minority or low-income populations that would not occur to other segments of the population. Such impacts are listed below:

- Result in a disproportionate taking of property from minority or low-income populations
- Cause disproportionate health hazards to minority or low-income populations
- Cause a disproportionate amount of hazardous wastes to be disposed of on property where minority or low-income populations reside
- Result in disproportionate adverse economic impacts on minority or low-income populations (loss of agricultural employment, including on-farm jobs)
- Result in the disproportionate relocation of minority or low-income people

The proposed assignment of WSID water supply to the City of Tracy would not disproportionately affect minority populations or low-income populations.

The proposed assignment of water supply would not result in taking of property, nor would it cause health hazards, result in disposal of hazardous wastes, or cause relocation of any populations.

Because lands are being detached from the district (and thus taken out of agricultural production), fewer farm workers may be required within the WSID service area. Farm workers would likely be members of a minority or low-income population. However, the detachment of lands is independent of the Proposed Action; i.e., it is expected to occur regardless of implementation of the Proposed Action because the City's General Plan provides for City growth and the lands that are detached from WSID would likely annex into the City. Implementation of the Proposed Action (the assignment of water from WSID to the City) would not result in a direct economic impact on any population.

Therefore, the proposed water supply assignment would not have an adverse human health or environmental effect, nor would it have a disproportionate effect, as defined by environmental justice policies and directives.

Effects of the No Action Alternative

Water Resources

Implementing the No Action Alternative would result in the proposed water contract assignment between WSID and the City not occurring. CVP water would continue to be delivered to WSID; however, due to lands being detached from WSID, water demand within the district is expected to continue to decline. It is reasonable to expect that WSID would continue to transfer water supplies to other water users on a short-term basis, similar to those transfers that have been historically implemented. As such, up to 5,000 af of water could be transferred by WSID to other water users in the region.

Because the City's population and employment levels are still expected to increase in the future, water demand within the City is also expected to increase. This would likely result in the City attempting to obtain water supplies from other sources. The acquisition of such supplies could be made through the transfer or assignment of other supplies from willing sellers located in either the Sacramento or San Joaquin valleys. Such transfers or assignments would be the subject of separate environmental impact review in accordance with NEPA and CEQA.

If the City were to further develop existing groundwater resources to obtain reliable supplies, this may result in declines in groundwater levels of regional groundwater supplies. The specific change to groundwater levels that may occur from further groundwater development is not known at this time.

Land Use

Implementation of the No Action Alternative would result in the proposed water contract assignment between WSID and the City not occurring. However, it is expected that lands would still be detached from WSID, and would change land use in accordance with the City's General Plan. Approximately 13,672 acres of existing undeveloped lands will be

converted to developed uses. Of these 13,672 acres, approximately 3,747 acres of agricultural lands within WSID would be converted to urban land uses.

Biological Resources

Implementation of the No Action Alternative would result in no impacts on wetlands, vegetation, wildlife, fish resources, or their habitats. Because the No Action Alternative would not result in the construction or modification of facilities, this alternative would not interfere with fish or wildlife movement, nor would it diminish habitat.

Future land uses in the City would be established in accordance with the City's General Plan. Because the General Plan would result in the alteration of existing land uses, including the conversion of open space and agricultural land to urban land use, a loss of vegetation and wildlife habitat would occur. As currently planned by the City, approximately 3,747 acres of agricultural lands within WSID would be converted to urban land uses.

These effects on biological resources (unrelated to implementation of the No Action Alternative) would be mitigated through a series of measures developed for the City General Plan, the Tracy Hills Specific Plan, the San Joaquin County General Plan, and the Tracy Wastewater Treatment Plant Expansion Project. The City is a signatory to the SJMSCP for impacts associated with the conversion of open space to urban uses (e.g., in-lieu fee payment, land dedication, mitigation bank purchase).

Cultural Resources

Implementation of the No Action Alternative would result in the proposed water contract assignment between WSID and the City not occurring. The continuation of existing land uses is not considered an adverse impact on cultural resources.

For substantial land use changes involving federally contracted water (as could occur as undeveloped City lands that overlap with WSID are developed into urban uses in accordance with the City General Plan), the required Section 106 consultation would consider potential effects to eligible historic properties pursuant to relevant federal law, rules, and regulations. Implementation of treatments recommended in the Section 106 consultation and related process would result in less-than-adverse impacts on eligible or potentially eligible archaeological or historic sites.

Socioeconomic Resources

Implementing the No Action Alternative would result in the proposed water contract assignment between WSID and the City not occurring. However, the City's population and employment levels are still expected to continue to increase. As indicated in Section 3 of this document, the City General Plan provides for substantial growth in the City, and SACOG projects population levels to increase substantially through 2025. This growth is expected to occur regardless of whether the No Action Alternative is implemented.

Current law, as amended with passage of SB 610, requires that local land management agencies identify water supplies sufficient to serve associated populations when considering certain residential development projects. Therefore, if the No Action Alternative is selected, the City would need to acquire alternative water sources to support future planned development.

Implementation of the No Action Alternative would also have no effect on population, growth, or employment in WSID. As lands within the overlap area of WSID and the City detach from WSID and urbanize, the number of agricultural-related jobs may be reduced. However, the urbanization of these lands is independent of the No Action Alternative and may be expected to occur regardless of whether the No Action Alternative is implemented.

Indian Trust Assets

As indicated in Section 3, no Indian Trust Assets (ITAs) have been identified in either the WSID or City of Tracy service areas. Therefore, implementation of the No Action Alternative would have no impact on ITAs.

Environmental Justice

Implementing the No Action Alternative would result in the proposed water contract assignment between WSID and the City not occurring. This would have no impact on minority or low-income populations.

SECTION 5

Cumulative Impacts and Growth-Inducing Impacts

This section discusses the potential cumulative impacts and growth-inducing impacts of the Proposed Action.

Cumulative Impacts

As defined in the CEQA Guidelines Section 15355, a cumulative impact occurs from the change in the environment, which results from the incremental impact of the project when added to other closely related, past, present, and reasonably foreseeable future projects. Cumulative impacts can result from individually minor, but collectively significant, projects taking place over a period of time.

CEQA Guidelines Section 15130(a) requires a discussion of the cumulative impacts of a project when the project's incremental effect is cumulatively considerable. Cumulatively considerable means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past and current projects.

Where a lead agency is examining a project with an incremental effect that is not cumulatively considerable, a lead agency need not consider that effect significant, but shall briefly describe its basis for concluding that the incremental effect is not cumulatively considerable. CEQA Guidelines Section 15130(a)[4] indicates that a project's contribution to a significant cumulative impact may be de minimus and thus is not significant. A de minimus contribution means that the environmental conditions would essentially be the same whether or not the project is implemented.

The Proposed Action would cause a substantial adverse effect if its incremental effects would contribute to considerable environmental changes when considered in combination with:

- Other projects located within the City of Tracy Sphere of Influence that have been planned according to the City's General Plan and the San Joaquin County General Plans
- The assignment of water from WSID to the City
- Other water supply transfers or assignments located in the vicinity

Specific projects that may contribute to cumulative effects on the environment associated with implementation of the City's General Plan include:

- Implementation of the Residential Specific Plan and the development of urban centers in Lammers, North Schulte, South Schulte, Patterson Pass, Tracy Hills, and Banta community areas

- Implementation of the Tracy Community Development Plan to include addressing the economically disadvantaged Downtown area, inadequate utilities, and traffic congestion
- Implementation of the Capital Improvement Program, including renovation to existing parks
- Implementation of the Industrial Specific Plan for industrial development in the eastern portion of the City
- Implementation of the I-205 Corridor Specific Plan, including development of commercial and industrial businesses in the I-205 corridor
- Expansion of the City of Tracy Wastewater Treatment Plant
- Projected increased use of Tracy Municipal Airport
- Construction of new utilities, schools, and libraries to accommodate projected population growth

Projects in San Joaquin County identified by the City as having the potential to cause cumulatively significant impacts in association with implementation of the Tracy General Plan include (City of Tracy, 1993a):

- Gold Rush City (also known as River Islands of Lathrop)
- Ruby Hills General Plan Amendment (GPA)
- New Jerusalem Expanded Community
- Tracy Station
- Tri State-Cheng GPA
- Mountain House
- City of Lathrop General Plan
- Riverbrook Expanded Community
- City of Stockton 1992 General Plan Revision
- City of Brentwood Draft General Plan
- South County Surface Water Supply Project

The City recognizes that the potential effects from proposed developments elsewhere in the County, when considered together with the planned development described in the City's General Plan, may generate impacts that are considered to be cumulatively significant (City of Tracy, 1993a). The City and San Joaquin County have developed mitigation measures to avoid, minimize, and compensate for adverse impacts to biological resources as a result of the urban growth (Table 5-1).

TABLE 5-1
Mitigation Identified for Biological Resource Impacts Associated with City of Tracy Urbanization

Project	Potential Impact	Mitigation	Significance After Mitigation
City of Tracy General Plan	Loss of wildlife habitat within the Tracy Planning Area	Prepare inventory of biological resources and financial plan for funding wildlife preserves	Significant and Unavoidable
		Require buffer zones around new developments which border open space	
	Potential for development at build out to adversely affect a special-status species or habitat for such species	Prepare a habitat conservation plan and conserve sensitive grassland habitats for San Joaquin Kit fox, and agricultural lands in the Delta vicinity for Swainson's hawk; and incorporate avoidance and mitigation criteria for burrowing owls	Less Than Significant After Mitigation

TABLE 5-1
Mitigation Identified for Biological Resource Impacts Associated with City of Tracy Urbanization

Project	Potential Impact	Mitigation	Significance After Mitigation
	Potential degradation of sensitive natural communities and features	Develop and implement a wetlands policy which requires no net loss of wetland value or acreage in the Tracy Planning Area	Less Than Significant After Mitigation
Tracy Hills Specific Plan	Impact Corral Hollow Creek corridor	Implement preserve programs in Corral Hollow riparian corridor	Beneficial After Mitigation
	Reduce San Joaquin kit fox habitat	Establish on-site and off-site preserves	Less than Significant After Mitigation
	Impacts to burrowing owls	Avoid and establish grassland preserves	Less than Significant After Mitigation
	Impacts to California red-legged frog	Design water features to preclude establishment by bullfrogs	Less than Significant After Mitigation
San Joaquin County General Plan	Loss and degradation of natural resources within the County	Development of an integrated vegetation management program for County-owned and maintained properties	Less than Significant After Mitigation
		Protecting areas large enough to be minimally affected by development, maintaining habitat connectivity, and enhancing degraded ecosystems	
		Development of a county-wide habitat conservation plan	
Tracy Wastewater Treatment Plant Expansion Project	Thermal impacts to fish	Development of a Thermal Plan to reduce thermal impacts on fish	Significant and Unavoidable Impact
	Degradation of Delta water quality	Addressed through state and federal programs	Significant and Unavoidable Impact
San Joaquin County Multi-Species Habitat Conservation and Open Space Plan	Take of species due to development in San Joaquin County	Mitigation of take through in-lieu fees, habitat land dedication, purchase of mitigation land credits, or proposing an alternative mitigation plan consistent with the SJMSCP goals	Less Than Significant After Mitigation

Source: City of Tracy, 1993a; San Joaquin County, 1992; Pacific Municipal Consultants, 1997; City of Tracy, 2001b.

As shown in Table 5-1, the City and San Joaquin County determined that, with appropriate mitigation, such impacts can be reduced to less-than-significant levels, with two exceptions:

- The loss of wildlife habitat within the Tracy Planning Area was found to be a significant and unavoidable impact (City of Tracy, 1993a). However, it is important to note that this determination does not reflect subsequent changes to the General Plan that reduce the amount of open space conversion from 21,237 acres to 17,636 acres, nor does it reflect the adoption and implementation of the San Joaquin County Multi-Species Habitat and Open Space Plan, or habitat preserve requirements in the Tracy Hills Specific Plan EIR.
- The increased discharge of treated wastewater effluent from the Tracy Wastewater Treatment Expansion Project may act, in a cumulative manner, with other ongoing

actions that adversely affect resident and special-status fish species. These other actions include changes in Delta water quality and flow patterns and entrainment of fish as a result of pumping at state and federal facilities. Although the proposed Wastewater Treatment Expansion Project would comply with all waste discharge requirements established by the Regional Water Quality Control Board, other ongoing regional programs and actions, such as the CALFED Program and Total Maximum Daily Load allocation, are intended to alleviate adverse conditions to these species.

The inclusion of new lands within the City boundary or land use changes involving the use of federally contracted water associated with planned development in the City's General Plan would trigger the need to implement Section 106 of the National Historic Preservation Act (NHPA). Section 106 and the other relevant federal rules and regulations are designed to ensure that all eligible and potentially eligible sites are adequately inventoried. The implication of implementing Section 106 for land use changes as a result of available new water is that the federal government (unless a federal grant statute expressly designates the grant recipient as a "federal agency") would be required to perform a cultural resources survey of lands that would change land use to determine the potential effects of such land use change if the project were deemed "an undertaking" as defined at 16 U.S.C. Chapter 1A, Subchapter II, §470w(7). Meeting Section 106 requirements is similar to complying with California Environmental Quality Act requirements; however, in addition to performing a cultural resources survey, a Native American Heritage Commission inquiry would be needed, and consultation with Native Americans would be required to comply with Section 106. Implementation of treatments recommended in the Section 106 consultation and related process would mitigate impacts from urbanization on eligible or potentially eligible archaeological or historic sites.

As discussed in Section 1 of this document, The West Side Irrigation District is concurrently proposing to assign up to 5,000 af of water from its existing CVP water contract to the City annually. The IS/EA for The West Side Irrigation District/City of Tracy Water Assignment Project, evaluating that project, is currently being prepared pursuant to CEQA, NEPA, and the ESA. That project would result in impacts that are similar to those described for the BCID/City of Tracy Water Assignment Project. No significant impacts on the environment were identified for the WSID/City of Tracy Water Assignment Project.

The Proposed Action was identified in the draft environmental assessment prepared for the Delta Division. The document is titled *Delta-Mendota Canal Unit Environmental Assessment, Long-Term Contract Renewal, October 2000.* It identifies changes in value of production, net farm revenue changes, changes to total employment and income, and potential land subsidence and changes in soil salinity. No impacts were identified for land use, air quality, surface water resources or quality, biological resources, cultural resources, recreational resources, visual resources, and public health.

As indicated in this EA/IS, implementation of the Proposed Action would not cause adverse environmental effects. No changes to the physical, biological, or cultural character of the environment would occur other than the conveyance of water from the WSID service area to the City of Tracy service area. The use and disposal of the assigned CVP water supplies would be performed in a manner consistent with the City's General Plan, other environmental documents prepared in accordance with CEQA, and prescribed measures assigned by regulatory agencies with authority over such facilities.

Implementation of the Proposed Action would accommodate the planned development of lands identified in the City General Plan, and development of those lands has already been addressed in the General Plan EIR. The environmental conditions would essentially be the same whether or not the Proposed Action is implemented. Therefore, the Proposed Action's contribution to cumulative impacts is considered to be de minimus, and thus is not significant.

Growth-Inducing Impacts

Section 15126.2(d) of the CEQA Guidelines requires a discussion of the ways in which the Proposed Action could foster economic or population growth or the construction of additional housing, either directly or indirectly, in the surrounding environment. The growth-inducing potential of a project would be considered to have a significant impact if the project either induced unplanned growth or created the capacity for growth to occur above and beyond the levels identified in the City of Tracy General Plan. It is, therefore, important to note that the City of Tracy General Plan, which guides future development and land uses within the City's Sphere of Influence (the City's future water service area), has previously identified the growth planned for the area, as discussed below. Removal of an obstacle to growth by supplying water would allow continued development to occur that was identified in the City's General Plan. This growth would, in turn, result in significant unavoidable impacts (after mitigation is implemented) that were identified in the City's General Plan EIR. That EIR identified significant unavoidable impacts on: agricultural uses, biological resources, traffic and circulation, air quality, noise, land use, and visual and aesthetic resources.

The City subsequently prepared and adopted a series of specific plans and EIRs addressing developments within various areas of the City. Planned development, as discussed in the City's General Plan, includes the conversion of agricultural and open space lands to implement the specific plans for residential, commercial, and industrial growth in the City of Tracy Sphere of Influence.

The City envisions that a majority of lands within the City's Sphere of Influence will be developed into urban land uses, including parks and open space reserves. It is not envisioned that agricultural uses will remain within ultimate city limits. Undeveloped land uses will be comprised of open space designated for the Tracy Hills Community Area (3,552 acres). Based on planned City of Tracy land uses, approximately 13,672 acres of existing undeveloped lands will be converted to developed uses, for a total of 22,183 acres of developed urban uses within the 25,735-acre Sphere of Influence.

The additional water supplies that would be available and assigned to the City would accommodate the planned urban growth within the City's Sphere of Influence. Implementation of the Proposed Action would not induce unplanned growth within the City, nor would the Proposed Action contribute to previously identified impacts associated with planned urban growth.

SB 610 amends the Public Resources Code and the Water Code. It requires a city or county that determines a project is subject to CEQA to identify any public water system that may supply water for the project and to request those public water systems to prepare a water

supply assessment. If water supplies are insufficient, plans for acquiring additional water supplies must be submitted. The bill also defines a "project" as the following:

- A residential development of more than 500 dwelling units
- A shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space
- A commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space
- A hotel or motel, or both, having more than 500 rooms
- An industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area
- A mixed-use project that includes one or more of the projects specified above
- A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project

The City will have to meet the requirements of SB 610 when approving any growth of the types described above that is planned to occur in the City. Complying with SB 610 requirements would be required independently of implementing the Proposed Action, i.e., if the Proposed Action is not implemented, the City would still need to demonstrate that it can obtain sufficient water supplies for the planned development in the City's service area. Implementing the Proposed Action would aid the City in providing sufficient water supplies to the development outlined in the City's General Plan.

SB 221 prohibits a city or county from approving a subdivision by means of a tentative map or parcel map, pursuant to the Subdivision Map Act, when there would be more than 500 dwelling units or the development would increase existing service hook-ups by more than 10 percent unless there is a commitment to serve by a local water purveyor and sufficient water supplies are available to meet the associated water demand.

Sufficient water supplies are the total water supplies available during normal, single-dry year and multiple-dry years within a 20-year projection of demand associated with the subdivision, in addition to other existing and future uses.

When a local water supplier provides verification of its ability or inability to provide sufficient water supply, it needs to be supported by substantial evidence such as a current Urban Water Management Plan, water supply assessment for the proposed project, or other analytical information similar to an assessment required by Section 10635.

The City will also have to meet the requirements of SB 221 when approving any growth that is planned to occur in the City. Similar to that described for SB 610, complying with SB 221 requirements would be required independently of implementing the Proposed Action, i.e., if the Proposed Action is not implemented, the City would still need to demonstrate that it can obtain sufficient water supplies for the development that is planned in the City's service area. Implementing the Proposed Action would aid the City in providing sufficient water supplies to the development outlined in the City's General Plan.

SECTION 6

List of Preparers

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SECTION 7

Consultation and Coordination

Persons, Agencies, and Organizations Consulted

The following personnel were contacted to obtain information to prepare this document. The people contacted are presented in alphabetical order.

Bayley, Steve. Deputy Director of Public Works. City of Tracy. 2002. Personal communication with Wendy Haydon / CH2M HILL. April.

Bell, Heather. U.S. Fish and Wildlife Service. 2002. Personal communication with Meri Miles / CH2M HILL. April.Campbell, Vicki. Chief. Conservation Planning Division. U.S. Fish and Wildlife Service, Sacramento Fish and Wildlife Office. 2001. Personal communication with Meri Miles / CH2M HILL. September.

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Lennihan, Martha. Attorney. Lennihan Law. Personal communication with Wendy Haydon / CH2M HILL. February.

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Welch, Patrick. Archaeologist / ITA Coordinator. U.S. Bureau of Reclamation. 2001. Personal communication with Wendy Haydon / CH2M HILL. December.

SECTION 8

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APPENDIX A

Environmental Checklist

APPENDIX B

Biological Assessment